

INFLUENCE OF SUCCESS/FAILURE FEEDBACK
ON GOAL ORIENTATION OF RECREATIONAL BASKETBALL
PLAYERS IN PRACTICE AND COMPETITIVE SETTINGS

BY

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INFLUENCE OF SUCCESS/FAILURE FEEDBACK ON
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PRACTICE AND COMPETITIVE SETTINGS

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This investigation was designed to test the theoretical constructs of goal orientation theory in practice and competitive settings, by examining changes in goal orientation, intrinsic motivation, self-efficacy, and attributions.

Sixty-eight male participants were assigned to one of six treatment groups based on responses to demographic questions and their scores on the Perception of Sports Questionnaire (POSQ). Task and ego oriented treatment groups received either failure feedback, success feedback, or no feedback for treatment during the practice conditions which were enforced during two separate meetings. A session was designed as a competitive setting, and involved a modified one-on-one basketball game between participants.

During each session, a series of questionnaires were completed that were designed to measure goal orientation, self-efficacy, intrinsic motivation, and attribution. Analyses revealed a significant difference between goal orientations during the treatment stage. Groups maintained higher POSQ responses within their specific goal orientation when compared with other treatments. Scores for task and ego responses on the POSQ remained stable for treatment groups during practice, but not competition. There were significant differences between the task failure and task success groups that lost during competition. Further analyses resulted in an interaction between practice success feedback and self-efficacy. All participants' self-efficacy responses were lower during competition. An interaction was observed for intrinsic motivation during competition. Winners from all treatment groups reported higher intrinsic motivation than losers. No interaction was observed between goal orientations and attributions across trial blocks.

Findings in this investigation suggest that goal orientations for task and ego characteristics remain stable over time during practice, but participants' task orientation shifts during competition. Also, it appears that there is a positive interaction between groups receiving success feedback and other self-perceptions (self-efficacy and intrinsic motivation). Theory regarding the stability of task orientation was supported during practice settings, but not in competition.

CHAPTER 1 INTRODUCTION

Maximizing motivation is a primary consideration for successful experiences and continuous involvement in them. To constantly perform a task well, whether it is related to sport, academics, or industry, a certain amount of motivation must be present. However, many aspects of motivation are not clearly understood.

To increase motivation and performance, and to better understand sport behavior, it is imperative that sport practitioners, researchers, coaches, teachers, and others obtain a greater understanding concerning the underlying social and cognitive processes that may guide motivation. The complexity of human behavior makes its analysis an extremely trying event. One's repertoire of behaviors may change from one event to the next, which adds to the difficulty of understanding them. To answer questions related to maximizing motivation in sport settings requires a sound theoretical framework that addresses the antecedents and consequences of achievement behaviors. In an attempt to determine how to further enhance motivation in sport settings, the theoretical frameworks of achievement motivation will be examined to answer questions that are posed in this investigation.

An abundance of research has been generated to investigate the influence that motivation has on performance. One area of focus has been achievement motivation, which is explained using a social cognitive approach.

In this concept, the cognitive mediators of behaviors are observed. Of particular importance is how individuals explain and interpret situations as they relate to specific events. This social cognitive approach is outlined in detail through the goal orientation theory of achievement motivation (Ames, 1984; Dweck, 1986; Nicholls 1984b).

A major assumption of the goal orientation research is that two prominent achievement goals influence sport behavior. These goals are labeled differently by researchers studying motivation. For example, the terms "learning" and "performance goals" have been adopted by Dweck (1986) and Elliott and Dweck (1988). Roberts (1993) used the terms "competitive" and "mastery" to explain the two goal orientations. "Mastery" and "ability-related" goals were used by Ames and Archer (1988) to describe goals that are self-referenced or referenced by others. Finally, for this investigation, the terms described by Nicholls (1989), "task" and "ego" involvement, will be used to describe the different goal orientations.

These two orientations represent separate behavioral constructs and are frequently associated with specific types of behaviors. For example, task orientation is considered a stable construct, which means that social cognitive responses on questionnaires and physical behaviors are expected to remain relatively constant when observed under successful and unsuccessful conditions. Even when failure is experienced or challenging situations are presented, individuals are expected to select moderately challenging tasks, focus on task mastery, and maintain persistence. Major importance is placed on the ability to understand and learn new information. Task involvement is

associated with making improvements from one situation to the next, and success is viewed as being derived from hard work (Duda, 1993). Individuals who are task oriented will emphasize competence, have positive attitudes, look for long-term accomplishments, have personal satisfaction, maintain strong work ethics, and demonstrate good sportsmanship. Effort is highly valued and adaptive patterns of behavior or functional responses to situations are exhibited when challenges are presented to a task oriented individual. These more internal responses are predicted because task oriented people are not motivated by external factors, such as social approval and extrinsic rewards, therefore there is no perceived threat to their competency (Nicholls, 1984a).

In theory, the patterns of behavior presented above are similar for ego oriented individuals until competency is threatened. Characteristics of ego orientation are successful goal accomplishment, which is obtained by defeating opponents; validation through social approval; and the overall purpose is egotistical. The focus is on winning and showing superiority over others while applying little effort. Nicholls (1984b) proposed that ego involved orientations will lead to maladapted behaviors when one's competency is questioned. Maladaptive behaviors may include dropping out of competition, negative attitudes, dishonest behaviors, poor sportsmanship, selecting tasks of extreme and unrealistic difficulty, not trying hard, and a lack of persistence. Data obtained within sport settings have supported these differences in goal orientations and are widely reported by Duda (1989, 1993), Roberts and Duda (1984), Duda and White (1992), Lochbaum and Roberts (1993), Newton and Duda (1993), and Roberts (1992, 1993) .

Goal orientation theory has been based on the assumption that task and ego orientation are separate perspectives, and are not on a continuum of two extremes (Duda, 1988, 1989; Duda, Olson, & Templin, 1991). This means that individuals may be high in both task and ego orientation, may be low in both orientations, or may have high scores in one orientation accompanied by low ones in the other.

Another presumption of this theory is that the orientation adopted, ego or task, is directly related to individual differences and the circumstances surrounding the event. Duda (1992) has proposed that an individual may display different goal orientations as situations change. However, the adaptation of a particular perspective is based on how much value one goal orientation has when compared with the other. Factors that impact these choices are associated with the environment, and are usually constructed by influential persons and feedback from significant others.

When the two distinct goal orientations are contrasted, there is strong evidence that task orientation leads to more adaptive behaviors, whereas ego orientation may produce less desirable outcomes. Despite the strong evidence in goal orientation theory that supports this view, minimal research has been conducted to assess whether goal orientations may be changed or situationally manipulated. A part of goal orientation theory suggests that task orientation is a stable construct, which results in minimal change regardless of treatment. Questions associated with testing goal orientation theory are of particular interest when considering the social, cognitive, and physical responses of

athletes as they function during practice in preparation for competitive events, and later, during actual competition.

In goal orientation theory, major emphasis is placed on developing environments that promote characteristics associated with task orientation. But, none of the goal orientation literature research has stressed developing ego oriented climates. Intuitively, it would seem logical that athletes performing at elite levels would adapt orientations that may change from one situation to the next. For example, the media often emphasize how hard athletes such as Michael Jordan and Emmitt Smith work during practice. They work on skills and drills that will allow them to excel during competition. Yet, when it comes to game day, it would seem reasonable to expect these athletes to be more concerned with winning, beating their opponents, and pleasing their fans, rather than process outcomes. Skills honed during practice make it possible for athletes to be productive during competition. It seems realistic and desirable to expect the successful athletes to adapt characteristics associated with task oriented behaviors during practice and then for them to become more ego oriented during competition. Therefore, the major purpose of this investigation is to test the theory of goal orientation by determining whether goal perspectives shift or remain stable in practice and competitive situations, when accompanied with success and failure outcome information.

As mentioned earlier, the differences identified between task and ego orientation is that task orientation remains stable under perceived success or unsuccessful conditions and ego orientations may vary depending on one's perception of success. This concept of goal orientation theory is of recent

interest to investigators, and will be examined in this research project. To investigate this idea, Hall (1989) created an environment where task and ego orientations were manipulated by using success and failure normative data. When failure feedback was given to ego oriented subjects, who had low manipulated perceived ability, they admitted to not working as hard as other groups and felt less competent concerning their ability throughout the experiment. Similar differences were observed in the ego oriented group with high perceived competency and, in both of the task oriented groups when they had high or low perceived competency. Only a few investigations of this kind have been completed. Therefore, it is important to establish reliable data regarding the influence of goal orientations under different experimentally manipulated conditions and to test the theory of goal orientation to determine whether goal orientations change or remain stable. This information may further support goal orientation theory or perhaps dispute some of the assumptions and tenets associated with the theory. Regardless of the findings, additional research in this area will contribute to the theoretical framework that is used to explain goal orientations in achievement motivation settings.

The relationship between goal orientation and other self-perceptions associated with motivation and performance outcomes are also of interest in this investigation. To determine how participants cognitively and affectively respond to feedback following several basketball tasks, variables such as intrinsic motivation (IM), self-efficacy (SE), and attributions will be compared with corresponding goal orientations. To date, only limited research has examined goal orientations and other theories of achievement behaviors in a

common paradigm. Landers (1983) and Gill (1986) both suggested a need for a multi-theory design to explain social cognitive factors of achievement behaviors in experimental investigations within the realm of physical activity. In doing so, this work may contribute to the theoretical framework that is associated with optimizing motivation in the physical domain and offer further insight towards understanding the behavioral differences found between individuals in this area.

Motivation Theory

Several theories have evolved that have attempted to explain motivation, with a major purpose of providing researchers with a better understanding of achievement motivation, for example, need achievement and test anxiety theory. However, the most pervasive theories that explain motivation incorporate social and cognitive approaches. The major premise surrounding this social cognitive approach is that a person's cognitive strategies will directly influence the choices and behaviors that occur.

To understand the cognitive processes guiding motivation, various cognitive and behavioral concepts have been developed. Achievement motivation is one of the most popular theories offered to explain motivation. The underlying stipulations guiding this theory are explained in goal orientation theory, where it is assumed that two major goal perspectives function in achievement contexts.

Achievement motivation theory attempts to address how a combination of personality and environmental factors influences behaviors and was designed to explain how individuals differ in character while striving toward certain goals.

For example, if a person cognitively interprets a task as being too challenging, depending how this individual is motivated (by internal feelings or approval of others) he/she may choose to avoid the task, to accept and possibly avoid failure, or accept the provocation as an opportunity to improve performance. Early pioneers (Atkinson, 1958; McClelland, 1951) in achievement motivation based their ideas on the premise that people are high or low in achievement behavior, depending on their concern for success, when being contrasted with some criteria or standard of excellence (Atkinson & Raynor, 1978).

Based on assumptions related to achievement motivation, goal orientation theory was developed. It was proposed that goals influence how people think, feel, and behave in various achievement situations (Nicholls 1989, 1992). Among the initial investigation of goal orientation theory, most of the research originated in the classroom, with the major contributors being Ames (1987, 1992), Ames and Ames (1984), Dweck (1986), Maehr and Nicholls (1980), and Nicholls (1984b, 1989). Recently, this theory has become of major interest for examining motivation in sport settings, where Roberts (1992) and Duda (1992) are considered pioneers. Major emphasis has been placed on being able to predict cognitive and behavioral antecedents and consequences.

As mentioned earlier, the two independent goal perspectives have been identified as task and ego orientation. Nicholls (1989) proposed that there is a link between task and ego feelings and exhibited behaviors. When reviewing goal orientation literature generated in sport settings, it was revealed that most of the research conducted in natural settings was designed to predict performance and cognitive responses (Duda, 1993). For example, following

performance, questionnaires were completed to assess individual or group goal orientations (Boyd & Callaghan, 1994; Duda, 1987, 1989; Duda & White, 1992; Lochbaum & Roberts, 1993; Newton & Duda, 1993; Roberts & Duda, 1984; Treasure & Roberts, 1994; Williams, 1994). These investigations have contributed to goal orientation theory by (a) establishing reliability and validity of psychometric scales, (b) identifying characteristics of goal orientations and adherence to competition, (c) determining what climates are better suited for optimal motivation, and (d) identifying the relationship between goal orientations and adapted and maladapted behaviors. Findings related to these investigations are presented in the following discussion.

In an attempt to establish reliable data related to the differences between the two goal orientations Duda (1989) and Duda, Olson, and Templin (1991) found support for task orientation over ego. High school athletes were identified as having task or ego goal orientation by their responses on the Task or Ego Orientation Sports Questionnaire (TEOSQ). As predicted, participants who were identified as being task oriented showed more compassion for teammates and opponents, better sportsmanship, and expressed thoughts that were more ethical than ego involved athletes. The ego involved athletes felt that it was a part of the game to attempt unsportsmanlike behaviors. They also reported that assisting an opponent was not a part of their game. Athletes scoring high on the ego portion of the TEOSQ exhibited more undesirable behaviors than other athletes.

Throughout the literature it has been reported that task orientation is preferred over ego orientation. Nicholls (1989) revealed that task oriented

environments maintained subject participation longer than those in more competitive surroundings. Furthermore, it was stated that interactions with influential individuals, such as teachers or coaches, who reinforced a particular goal orientation, resulted in participants adopting characteristics associated with that orientation.

Relationships Between Perceptions Influenced by Motivation

Based on the concept of using a social cognitive perspective to explain motivation, it seems reasonable to assume that a person's goal orientation may interact with other motivated behaviors. Data have established this to be true in academic areas and investigations are in the preliminary stage for sport settings. For this study, behaviors associated with IM, SE, and attributions are of particular interest. Research conducted in these areas are highlighted under each respective sub-heading.

Intrinsic Motivation (IM)

Intrinsic motivation is voluntary engagement in an activity for its pleasure and enjoyment without external influences (Deci, 1975). It has been proposed that IM alone is not necessarily sufficient in predicting successful performance. Instead, a person's perceived competency, value placed on the task, and determination all influence inherent responses (Deci & Ryan, 1985; Roberts, 1992). Researchers have found that participants are more intrinsically motivated following activities in which they felt competent and had successful experiences when compared with less successful events (Vallerand, 1983; Vallerand & Reid 1984; Weinberg & Ragan, 1979). In an attempt to incorporate

IM into a more comprehensive theory of motivation, research has been conducted that tested the relationship between achievement motivation and IM.

It has been suggested that task oriented individuals will have increased IM for performing, whereas a person who is operating under an ego goal orientation will feel less pleasure, more pressure, and have lowered IM for the activity (Duda, 1992; Dweck 1986). These findings are inconclusive, Deci and Ryan (1985) reported that when individuals have positive opinions regarding their performance, they are more likely to have higher levels of IM as opposed to negative beliefs about their abilities. This concept was supported by McAuley and Tammen (1989), using a basketball shooting task. They found that negative feedback (losing) only affected intrinsic motivation negatively when perceived competency was threatened or subjective interpretation of one's performance was perceived as negative.

Duda, Chi, Newton, Walling, and Catley (1995) compared the relationship between goal orientation and intrinsic motivation using students enrolled in college level activity classes (tennis, basketball, and volleyball). The results revealed a strong relationship between task orientation and perceived competency. Task oriented groups produced greater scores on the Intrinsic Motivation Inventory (IMI) than the ego oriented groups. Similarly, Lloyd and Fox (1992) found that when external factors were reinforced in a physical education program, students had significantly increased ego orientation scores and less IM. The overall findings suggested an interaction between IM and task orientation.

Self-Efficacy

Self-efficacy (SE) has been used as a method of clarifying questions associated with achievement motivation, particularly in academic and sport environments. Bandura (1977,1982), a pioneer in efficacy research, and Feltz (1992) described SE as an on-going process for explaining competency. Efficacy may be modified depending on feedback obtained from environmental factors, previous experience, and cognition relating to performance. Self-efficacy deals with how proficient an individual feels in an attempt to carry out specific tasks and produce a desired outcome.

Using physical fitness tasks, Chi (1993) found that regardless of performance, participants who were task oriented reported greater SE than ego involved students. Overall, there is little research in sport regarding the influence that achievement motivation has on SE, however, it appears that there may be some connection between SE and task goal orientation.

Attributions

Attribution theory is another means used to explain self-perceptions regarding motivation and social cognitive behaviors. The guiding assumption associated with attribution theory is that casual interpretation given to explain success and failure guides an individual's expectations and subsequent behavior (Weiner, 1974).

Attribution theory has been well documented as a method of measuring individual perceptions of motivation by controlling successful and unsuccessful experiences, then asking a series of questions related to the cause of the performance. A general assumption is that winning and losing are direct

determinants of success and failure. However, Roberts and Duda (1984), Maehr and Nicholas (1980), and Spink and Roberts (1980) have reported that an individual's psychological interpretation of performance is a better indicator of success and failure than outcome scores.

Duda and Chi (1989) assessed the relationship between goal orientations and attributions using a basketball task. They divided a class into task and ego goal orientation groups. The ego orientated group was comprised of males who were instructed to compete against students of similar skill level in a one-on-one basketball competition. The winner was identified as the first person to reach 12-points. The task motivated group was instructed to play one-on-one basketball for a specified length of time. They were falsely informed that no loser or winner would be identified. Following competition, all participants were instructed to rate their performance in relation to effort, their perceived basketball skill, their opponents skill level, and any lucky breaks.

Findings revealed that more winners perceived that their skill level had more of an affect on their performance than losers. Losers believed that external factors such as their opponent's skill level influenced their performance. Also, ego oriented losers, when compared with losers in the task involved group, were less likely to attribute their performance to effort.

Spink and Roberts (1980) reported that when participants were asked to rate their own performance and their opponents' perceived ability, not necessarily winning and losing, their casual attribution responses were influenced. For example, in a racquetball study, Spink and Roberts (1980) reported that winners who regarded their opponent's performance as

competent and challenging attributed their success to internal factors such high ability and effort, which are considered functional characteristics. Participants who lost to less competent opponents attributed their loss to their low ability and lack of effort which are considered dysfunctional attributions. When observing these findings, functional attributions and SE seem to be closely related.

Overall, theories of achievement motivation have contributed substantially to the current body of literature regarding performance. In sport, teachers and coaches are becoming more proficient in determining how different behaviors and emotions influence performance. However, for a more accurate assessments concerning the association between social cognitive feelings and behaviors, further investigations are necessary.

Statement of the Problem

The purpose of this study was to investigate whether there were potential shifts in goal orientations when observed during practice and competitive conditions. Additionally, this study was designed to examine the effect of successful and unsuccessful feedback on goal orientations. Goal orientations were assessed, using the Perception of Success Questionnaire (POSQ), during two different basketball settings: A practice setting and a one-on-one basketball competition. To further understand the influence that goal orientations may have had on behavior, the interaction between goal orientations and IM, SE, and attributions were examined.

The independent variables were (1) the conditions for performing, either practice or competition, and (2) feedback, successful or unsuccessful. The categorical variable was goal orientations, either ego or task. Dependent

variables included the Intrinsic Motivation Inventory (IMI) for determining intrinsic motivation, the Casual Dimension Scale (CDSII) for assessing attributions, and self-efficacy scales for observing efficacy beliefs.

Research Hypotheses

Several hypotheses relevant to this research were posited and examined during this investigation:

1. During the practice setting, the task oriented group that receives successful feedback will report higher task scores on the POSQ than all other treatment groups. This treatment group will have greater scores on the self-efficacy scale (SES), the IMI, and more functional attributions on the CDSII when compared with the task oriented failure, task oriented control, ego oriented failure, and ego oriented control treatment conditions. No differences are expected between the task and ego oriented treatment groups receiving success feedback on their SES, IMI, and CDSII scores.

These expectations are based on research that has supported goal perspective literature. In the past, research in sport settings has indicated that participants' underlying feelings of success or failure are based on their perceptions of demonstrated competency (Boyd & Callaghan, 1994; Duda, 1981; Duda & White, 1992; Gill & Deter, 1988; Kimiecik, Allison & Duda, 1986; Lochbaum & Roberts, 1993; Nicholls, 1989; Roberts, 1982; 1984; Roberts & Balague, 1989; Roberts & Duda, 1984; Vealey, 1986). It is expected that individuals in the task oriented success treatment group will perceive themselves as competent and their task involved conceptions are expected to

lead them to a mastery plan of action, which will correspond to high task responses on the POSQ (Roberts, 1992).

Furthermore, it is suggested that there is an interaction between goal perspectives and other forms of self-perception that are related to motivation (SE, IM, and attributions). These findings have been supported in academic settings (Ames & Ames, 1981; Dweck & Leggett, 1988) and are currently being observed in sport environments (Deci & Ryan, 1985; Duda & Chi, 1989; Duda, Chi, Newton, Walling & Catley, 1995; Feltz, 1992; McAuley & Jacobson, 1991; McAuley & Tammen, 1989; Maehr & Nicholls, 1980; Spink & Roberts, 1980). Investigations are in the preliminary stages for sport research, however, there seems to be a trend that indicates a connection between task orientations and (a) feelings of efficacy or confidence in ability, (b) IM, and (c) functional attributions.

2. Task oriented participants, who receive failure feedback while practicing, will have higher task scores on the POSQ when compared with all ego treatment conditions. Based on goal orientation theory, this group should have higher scores on the SES, IMI, and more functional attributions on the CDSII when compared with the ego failure treatment group.

Support for this hypothesis rests in the goal perspective research which identified task orientation as a relative stable construct in both winning and losing situations (Nicholls, 1989, 1992; Roberts 1982, 1992). It is expected that this treatment group will perceive themselves as competent and failure performance feedback should not change their goal orientation. However, during pilot testing, participants' task scores on the POSQ were numerically

lower following failure feedback when compared with their baseline scores. It is suggested that the task orientation group receiving failure feedback will have lower task scores on the POSQ when compared with their baseline task responses.

3. While participating in the practice phase of the experiment, task oriented individuals in the control group will have greater task scores on the POSQ than all ego treatment groups. Participants in this group will have higher scores on the IMI, SES, and more functional attributions on the CDSII when contrasted with the ego oriented group receiving failure feedback.

Similar to the second hypothesis, task orientation is thought to remain stable over time (Nicholls, 1989, 1992; Roberts 1992). Since the task oriented control group will receive no treatment, very little change in their responses to the task questions on the POSQ is expected. Further, the task oriented control group should not experience any threat to their confidence or ability, according to goal orientation theory. Therefore, their task orientation scores should remain stable (Nicholls 1989, 1992; Roberts 1992). The task oriented control group should feel more competent than the ego orientation failure group because of the guiding premises of goal orientation, which suggest that ego oriented individuals will adopt dysfunctional coping behaviors when competency is questioned. The ego oriented group receiving failure feedback should feel a threat to their competency and ability. Because of these feelings the task oriented control group is expected to have higher scores on the IMI, SES, and more functional attributions on the CDSII.

4. During practice, the ego oriented group receiving success feedback will have higher scores on the ego questions of the POSQ when compared with all other treatment conditions. This group will also have greater scores on the SES, IMI, and more functional attributions on the CDSII when compared with the other ego treatment conditions, the task oriented group receiving failure feedback, and the task oriented individuals in the control group. No differences are anticipated between the two treatment groups that receive success feedback.

As previously stated, past research related to goal orientation theory has unveiled that feelings of success or failure are based on the perception of one's competency. Since positive performance feedback is part of the treatment for the ego oriented group receiving success, it is expected that these participants will perceive themselves as competent and their ego related feelings will increase, which is expected to lead to high ego scores on the POSQ (Roberts, 1992). The ego success oriented group is already high in ego-related feelings, therefore it is expected that the positive feedback will result in scores similar to their baseline performance or lead to even greater ego scores on the POSQ when compared with their baseline scores.

As mentioned earlier, it seems that goal orientations are related to other self-perceptions concerning motivation and other social cognitive feelings (SE, IM, and attributions). Although sport investigations are in the preliminary stages, the assumption is that a strong interaction exists between ego involved goal orientations (when competency is not being challenged) and positive feelings of efficacy, IM and functional attributions.

5. The ego oriented group, receiving failure feedback during practice, will have unpredictable scores on the ego items of the POSQ. This group will have lower scores on the IMI, SES, and more dysfunctional attributions on the CDSII when compared with all other treatment conditions.

According to goal orientation theory, ability will be questioned under this treatment condition. Therefore, individuals in this treatment group should perceive that social approval and competency is being challenged, causing maladaptive orientations to be exhibited (Duda, 1993; Nicholls, 1989, 1992; Roberts, 1992). Furthermore, since competency is challenged, this group is expected to have lower SE and IM, and more dysfunctional attributions when contracted with all other treatment conditions.

6. In the practice setting, the ego orientated control group will have higher ego scores than all task oriented conditions on the ego questions of the POSQ. This group will report lower scores on the SES, IMI, and more dysfunctional attributions on the CDSII when compared with the task oriented success and ego orientated success treatment groups. Self-perceptions of this group are expected to be higher and more functional on the same questionnaires when observed with all treatment groups receiving failure feedback.

The ego control group will receive no treatment, and there should be very little change in their responses to the ego questions of the POSQ. The baseline scores on the POSQ, related to the ego portion of the questionnaire, are much higher than those of the task oriented group, therefore, it is likely that the ego

control group will maintain higher scores on the ego items of the questionnaire when compared to all task oriented groups.

Without treatment, the ego control group should experience little threat to their competency or ability. Therefore, their ego scores on the POSQ should remain stable (Nicholls 1989, 1992; Roberts 1992). It is expected that the ego oriented control treatment group will report less confidence than both success groups and greater feelings of competency than the ego failure treatment groups.

7. When competing, participants who are task oriented and are winners, will report higher task scores on the POSQ than all losers (task and ego oriented). Task oriented winners will have greater ego scores than task oriented losers. Task oriented winners will also have higher scores on the SES, IMI, and more functional attributions than all losers (task and ego oriented).

Since the task oriented winners should be confident in their ability, it is expected that this group will report higher task scores on the POSQ when compared with all other groups. Since they are already mastery learners, their task scores on the POSQ should be maintained or increase when compared with their baseline scores.

Because of the competitive setting, the climate is perceived as promoting feelings associated with ego orientation (Ames, 1992). Nicholls (1989) suggested that direct competition and social evaluation are likely to elicit ego involvement. Consequently, it is expected that all task groups will have greater ego scores on the POSQ than those reported on their baseline responses.

Also, the task oriented winners will experience greater feelings of IM, SE, and more functional attributions because the competitive setting should result in more positive feelings for the winners and negative emotions for the losers.

8. Winners in the competitive setting who are ego oriented will report higher ego scores on the POSQ than all losers (task and ego oriented). This group will report higher scores on the SES and IMI, and more functional attributions than the task and ego oriented losers.

Since there is no perceived threat to this group's competency, they are expected to have increased feelings that are associated with ego characteristics. Their ego scores on the POSQ will increase after being successful and beating their opponent. The ego oriented winners will experience greater feelings of IM, SE, and more functional attributions because the competitive setting is anticipated to produce more positive feelings for the winners than the losers.

Definition of Terms

To understand the terminology used in this dissertation, the following terms are defined:

Achievement Motivation Theory - Proposes that a combination of personality and environmental factors guide behaviors with the premise that individuals may be high or low in motivation based on their concern for success, when being compared with some criteria (Atkinson & Raynor, 1978).

Attribution Theory - A theory of achievement that relates to the social and cognitive rules or schema that a person adopts to explain motivation and

account for the perceived causes of specific behavioral outcomes (Weiner, 1979; Weiner 1985, 1986).

Casual Dimension Scale-II (CDSII) - A motivational scale designed to measure attributions in the following dimensions: Locus of control, external control, stability, and controllability (McAuley, Duncan, & Russell, 1992).

Competitive Setting - An experimental session where a participant will compete against another individual of similar skill level in a one-on-one basketball competition.

Ego Orientation - A construct of goal orientation which suggests that successful goal accomplishment is obtained through defeating opponents (by using less effort), validation is through social approval, overall purpose is egotistical, and when competency is questioned, maladapted behaviors are expected (Duda, 1993; Nicholls, 1989; Roberts, 1992).

Goal Perspective Theory - Indicates that meaning is given to performance and personal goals are established that leads an individual to demonstrate high ability and to avoid low achievement or failure (Ames, 1984; Nicholls, 1984, 1989).

Intrinsic Motivation - A concept of achievement and competency that is characterized by voluntarily engaging in an activity for its pleasure and enjoyment without external influences (Deci, 1975; Deci & Ryan, 1985).

Intrinsic Motivation Inventory (IMI) - A valid and reliable 16 item generic scale that can be modified to fit the task of interest. The scale is designed to measure a person's level of intrinsic motivation in four different dimensions:

Interest-enjoyment, perceived competence, effort-importance, and tension-pressure (McAuley, Duncan, & Tammen, 1989; Ryan, 1982).

Motivation - An energizing force, that is comprised of many dynamics, within an individual's environment that guides behavior (Gill, 1986; Maehr & Braskamp, 1986; Singer, 1984).

Perception of Success Questionnaire (POSQ) - A psychometrically sound, valid, and reliable assessment tool that supports the existence of two orthogonal goal perspectives. The instrument was originated to measure specific goal orientations in a sport-specific context (Roberts & Balague, 1989).

Practice Setting - An experimental session in which participants will attempt to improve in their performance on a Shoot and Rebound Task (SRT) and a Dribble and Shoot Obstacle Task (DSOT) with scores being compared to presumed norms.

Self-efficacy - An on-going achievement concept in which participants internalize their perception of competency through feedback, which is modified depending on information obtained from environmental factors, previous experiences, and cognitions related to performance (Bandura 1977, 1982; Feltz, 1992).

Task and Ego Orientation in Sports Questionnaire (TEOSQ) - A 12 item scale that is considered valid and reliable; the instrument was developed to measure differences in individuals' task and ego goal orientations within the sport domain (Duda & Nicholls, 1989; Duda, Olson, & Templin, 1991).

Task Orientation - A component of goal orientation theory which suggests that successful accomplishment is self-referenced and major importance is

placed on the ability to understand and learn new information. Value is placed on effort and adapted patterns of behaviors (such as trying harder) are exhibited in challenging situations (Duda, 1993; Nicholls, 1989; Roberts, 1992).

Assumptions

The following assumptions are pertinent for this investigation:

1. All participants had a genuine interest in the tasks and desired to perform to the best of their ability.

As recreational basketball players, subjects participated in basketball on a voluntary basis. Therefore, it is assumed that they engaged in this experiment with an eagerness to perform well. Also, participants indicated how strong their passion was for playing basketball on the demographic questionnaire.

2. Participants' goal orientations were correctly identified in the beginning of the study.

The POSQ was given prior to any treatment. Each question was read and explained as needed. Respondents were informed that there were no right or wrong answers and further encouraged to record their gut feelings without regard for influencing the experimenter.

3. Participants responded honestly to each item on all questionnaires.

During the experiment, all questionnaires were completed while under the supervision of the experimenter and under terms of confidentiality. Participants were reminded there were no correct or incorrect responses. Periodically, they received reminders to inform them that throughout this investigation all information should be taken seriously and responses on each

questionnaire should accurately reflect their opinions or feelings as they related to a particular situation.

4. Participants were adequately matched on skill level prior to the one-on-one competition.

Prior to competition, individuals completed a screening task to assess their shooting ability. Scores obtained on the screening task were used to separate them into equally skilled competitive groups.

5. Task and ego orientation groups were equal in skill levels prior to treatment.

Groups were generated based on their responses on the demographic questionnaire and the POSQ. Afterwards, individuals were randomly assigned to their respective treatment conditions within each stratified group.

6. Participants exposed to failure feedback experienced no long term negative emotions relating to their ability to perform successfully when compared to others in basketball.

Following the experiment all participants received a debriefing letter informing them that the feedback received following each practice setting was bogus. Participants received information that no norms actually existed and that those procedures were provided as part of the treatment needed for the investigation.

Limitations

The following limitations are identified with an explanation of how those conditions were reasonably controlled.

1. Participants may not have believed the situationally-induced success or failure feedback assigned to them during the practice setting.

To make the feedback realistic, participants were informed their performance was compared to previously established norms of male recreational basketball players with similar experience. To mask knowledge of their performance, they were given feedback following a series of trial blocks. Further, a combination of times and trials were provided to ensure that actual performance could not be determined by the subject. Also, a list of numbers indicating presumed norms were used and could be seen from a distance by participants to make the feedback more believable. During pilot testing, a combination of these factors were found to be sufficient to convince individuals that the feedback was realistic.

2. The nature of the environment, using a simulated practice setting, may have resulted in different responses to the treatment than a "real life" practice setting.

Participants may answer questionnaires according to how they think the experimenter expects them to respond or how they would like to be perceived, not how they actually feel. To ensure that the practice setting is modeled similar to regular basketball practice conditions, skills such as dribbling, shooting, agility, and precision were included in the tasks. By offering experiences that are practical to actual basketball situations, it was assumed that participants' responses were similar to those found in regular practice situations. To further reduce the chances of misrepresentation of actual feelings and to reduce some redundancy, subjects participated in two different basketball drills. The same

feedback (failure or success) was provided throughout the experiment and the same questionnaires, with minimal changes, were administered following the two different tasks in order to better assess the reliability of responses.

3. Participants may experience effects of testing and become repetitious in their responses on the questionnaires due to the number of times each is given.

To overcome this limitation, treatments were extended over three separate days during a three-week time span. It was assumed that the time was adequate to keep participants from memorizing previous responses. Furthermore, minimal changes were made on some of the questionnaires, to be consistent with the task. On the second and third day of treatment, participants were reminded that although the process is somewhat repetitious, it is imperative that they take each item on all questionnaires seriously and respond honestly to the best of their ability.

4. During the competitive phase of the experiment, the strength of the treatment may have weakened due to time span between the game and the opportunity to respond to the questionnaires.

Following the competition, one person had to wait for the experimenter before completing one of the questionnaires. To minimize this problem, participants were reminded of their performance (score) prior to answering the questionnaire. It is assumed that if any emotions were dissipating, the reminders may generate feelings that were similar to those experienced at the end of the game. Participants' opportunity to answer this questionnaire was counter-balanced between winners and losers following each competition.

5. Participants who are not happy with their previous performance (due to negative feedback) during the practice setting may have preconceived negative feelings about their ability in the one-on-one basketball competition/game.

To lower this possibility, individuals were given approximately 1 week between the last practice session and competition. This time span provided subjects with the necessary time to change their perceptions related to their previous performance. Prior to the one-on-one competition, individuals were instructed to only think about how they were currently feeling. Subjects were informed prior to competition that they were grouped with an opponent of equal skill level based on the screening task. This information may have relieved apprehensive feelings concerning ability. Following the game, individuals were asked to only consider their emotions as they related to how they were currently feeling when answering questionnaires.

Significance of the Study

The need for appropriate motivation in sport and exercise is a widely accepted phenomena. Researchers (Klieber & Roberts, 1981; Nicholls, 1989; Roberts, 1993) have identified sport participation as a tool for personal growth, character building, and a place where values are developed. In theory, the social cognitive perspectives associated with goal orientations are not limited to academic and sport environments. Nicholls (1989) suggested that by adopting specific goal perspectives, people are indicating differences in world views. He further proposed that different goal orientations are indicative of a person's beliefs as they relate to a wide concept of motivational and achievement

behaviors. Nicholls' view has been explored in both academics (Thorkildsen, 1989) and sports (Duda, 1989). Duda investigated the perceived role of sport, and found that people who were task oriented, felt that sport should teach: (a) value in mastery, (b) adherence for life, (c) good citizenship, and (d) high self esteem. Individuals with strong ego orientations believed that sport should contribute to personal status and self-importance.

There is a large body of research in academic and sport settings that supports the adaptation of task-related perspectives as being important in perceived successful experiences. However, the theoretical tenets of goal orientations in different achievement situations have received little attention. It is not clear to what degree goal orientations may change under different conditions. Therefore, this preliminary investigation is to test the theory of goal orientation by determining if there are shifts in goal orientations, when observed under different situations, findings should contribute to the theoretical framework of achievement motivation literature.

Ames (1984), Duda (1992), and Dweck and Leggett (1988) emphasized the importance of being able to determine the impact of different situational demands on goal orientations. Consequently, the data obtained from this investigation should contribute to the body of knowledge of achievement theory. If shifts in goal orientations are observed under experimenter manipulated conditions, these findings will provide a different viewpoint related to the concept of the stability of task perspectives as proposed by Ames (1984), Duda (1992), Nicholls (1989), and Roberts (1992). These conclusions may bring

additional clarification to the current literature and result in further research which attempts to explain, from a theoretical perspective, why shifts occur.

A major concern of theorists studying achievement motivation is to determine how goal orientations relate to cognitive and affective behavior. This line of research is important because as evidence is accumulated relating to the interdependencies between goal orientations and IM, SE, and attributions, there will be a basis for additional intervention strategies in sport settings (Duda, Chi, Newton, Walling, & Catley, 1995). In education, researchers have found that goal perspectives influence attribution, efficacy or perceived competency, and intrinsic motivation in many situations. Research being conducted to determine the interrelations between goal orientations and other social cognitive perspectives in sport is in the preliminary stages (Duda, 1992).

The most applicable implications of this research is in regard to an individual's performance as it relates to perceived competency, affective concerns, and internal factors. If goal orientations can be manipulated and are related to other social cognitive feelings, these findings may be useful for students, athletes, teachers, coaches, and other practitioners.

As research is conducted and answers are obtained in the realm of sport, it is imperative that practitioners are able to establish environments that foster appropriate goal orientations and facilitate IM, SE, and functional attributions. By developing this sort of climate, participants, regardless of ability, may have resulting feelings of competency and regard their performance as successful because of the learning involved.

CHAPTER 2 REVIEW OF LITERATURE

The focus of this investigation was directed towards manipulating different achievement motivation situations in a sport specific environment. The purpose was to test the theory of goal orientation by determining whether motivational orientation shifts are observed under practice and competitive conditions with success/failure feedback. Therefore, to provide an extensive overview of the relevant research, this chapter is presented as follows. The first section will include general definitions of motivation as defined by Gill (1986), Maehr and Braskamp (1986), and Singer (1984), followed by a brief discussion of how Butt (1976) explains the relationship between motivation and athletic performance.

The second segment, which is most relevant to this investigation, includes the theoretical framework of achievement motivation as it is related to goal orientation. This section is further designated to presenting the pertinent research in sport settings which addresses the theoretical perspectives of achievement motivation. Afterwards, various methods of measuring motivated behaviors and/or feelings are examined and although, not inclusive, the following items will be addressed (a) persistence, (b) exerted effort, (c) task choice, and (d) motivational scales. In the fourth section, various physical, social, and cognitive concepts used to study motivation are presented and their influence on goal orientation is explored. These areas are limited to self-efficacy, intrinsic motivation, and attribution.

Motivation Defined

Motivation is central to our understanding of achievement behaviors. In an attempt to explain the importance of motivation in sport, various researchers (Gill, 1986; Maehr & Braskamp, 1986; Singer, 1984) have presented their perspectives which resulted in similar emphasis and commonality. For example, Gill (1986) suggested that motivation is possibly the most essential construct in psychology, and is the primary factor for people making certain choices to perform particular tasks. Gill further explained that motivation was guided by two components; intensity and direction. The term arousal has frequently been used to explain the intensity element of motivation and behavior modification has been presented to describe how different experiences guide behaviors into various directions. Yerks and Dodson (1908) attempted to clarify the relationship between arousal and physical performance through the inverted-U theory. This theory suggested that a person's level of arousal is directly influenced by anxiety and, consequently, performance will be affected. For additional information concerning arousal and motivation, see Hull (1943), Jones (1990), Martens (1974), Martens and Landers (1970), and Selye (1956).

Similar to Gill (1986), but from an achievement goal approach, Maehr and Braskamp's (1986) opinions about how motivational factors influenced performance seemed to overlap. In particular, these individuals viewed motivation as a complex phenomena that is central to understanding behavior. Maehr (1984) stated that motivation begins and ends with the study of behavior. They believed motivation influenced at least five different behavioral patterns. These behaviors include, (1) direction or choice of behaviors,

(2) persistence of behaviors, (3) continued motivation, (4) intensity or arousal level during performance, and (5) actual performance. Maehr and Braskamp also suggested that differences in behaviors are not solely based on levels of motivation, but may be a result of individuals' perceptions of what is an acceptable achievement goal within their social context. Similar to these theorists, Singer (1984) supported the belief that motivation is a guiding force that leads individuals toward specific behaviors related to performance in sport.

Singer suggested that a person's choice to be active in sport is directly related to one's perceived motivation. He further proposed that behaviors are influenced by motivation in three major ways, the first being the choice of participation in certain activities. This motive is ordinarily guided by external and/or internal forces, depending on specific characteristics of the individual. The second factor is that motivation influences how long a person will persist at a given task. Individuals who feel satisfied with their experiences will generally persevere longer than others. Lastly, a person's level of motivation affects actual performance during an activity. Singer concluded that a person must have an optimal level of motivation before and during performance in order to maximize their efforts.

In conjunction with other theorists, but from a more philosophical standpoint, Butt (1976) considered motivation as a key factor and guiding force in athletic performance. She suggested that motivation could be broken down into three critical components of sport. The first level has been identified as biological and is related to life forces or energy. These components are responsible for the struggle for survival and the will to win. Forces in the initial level lead to psychological responses which are comprised of three energy

sources (aggression, neurotic conflict, and competence). These energy sources will lead to the final level of motivation which is called the social motive of sport. In particular, aggression and neurotic conflict are likely to result in competitive social motivation, whereas competence will lead to a more cooperative social motive. This concept is similar to the goal perspective theory, which is presented later in this chapter.

There has been extensive research examining the effects of motivation on behavior. Although there is little consensus among these researchers concerning the definition of motivation, the overwhelming majority seem to indicate that motivation is an energizing force that is comprised of many dynamic components within an individual's environment, which guides achievement behavior. Therefore in sport, whether inquiry is related to persistence in practice, effort a person invests, the commitment of the players, stability over time, or different levels of motivation, there is need for a deeper understanding regarding the impact of motivation in sport.

It is accepted that motivation is important in sport behaviors, however, the complexity surrounding the concept is poorly understood. It seems imperative that sport practitioners, researchers, coaches, teachers and others attempt to further understand the underlying processes guiding motivation. Investigations should include how to properly assess, intervene, and predict behavior in order to optimize motivation and performance. In an attempt to further understand motivational processes, various cognitive and behavioral concepts have been developed and investigated within academic and sport settings. One such area has been identified as achievement motivation.

Achievement Motivation and Goal Orientation

McClelland (1951) and Atkinson (1958) have completed extensive research in the area of achievement motivation. This theory attempts to predict and explain how individuals differ in character while striving toward similar goals. In theory, a combination of personality and environmental factors are believed to guide achievement behaviors. Pioneers who studied achievement motivation have based this concept on the premise that people are high or low in achievement motivation based on their concern for success when being compared to some criteria or standard of excellence (Atkinson & Raynor, 1978).

Several theories have evolved in an attempt to measure and explain achievement behaviors, for example, need achievement theory and test anxiety theory. However, the most pervasive theories, to explain achievement behaviors in sport, have used the social cognitive approach. The major premise surrounding this concept is that a person's cognitive strategies (whether related to perceptions, feelings, emotions, anxiety, motivation, or sport personology) directly influence choices and behaviors. Therefore, it is suggested in this research project that by furthering our understanding of achievement motivation, our ability to predict behaviors and intervene to modify dysfunctional and/or improve functional patterns of behavior will be greatly improved.

Achievement goal theory is associated with a social cognitive approach to explain achievement motivation. The underlying objective is to understand how perceived goals influence behavior and the theory is based on the premise that two prominent goal orientations exist to explain achievement behaviors. These two independent goal perspectives have been identified as task and ego

orientation (Nicholls, 1984b), mastery and competition (Roberts, 1993), and learning goals and performance (Dweck & Leggett, 1988). Although the terminology varies between researchers, the underlying concept is that one orientation is influenced by external factors (ego) and the other by internal satisfaction (task). For this research project, the terms task and ego are used to describe the different goal orientations.

Certain characteristics have been identified to explain the differences between the two goal perspectives. People who identify closely with task goal orientation focus more on the process and are interested in mastery learning. Their achievement behaviors are considered intrinsic and success is thought to be under their control (Dweck, 1986; Nicholls, 1989). Under this goal orientation, optimal motivation may be observed. Task oriented behavior is considered more stable and, regardless of perceived competency, individuals will persist longer at an activity and attempt tasks of moderate difficulty that are attainable. Successful accomplishment is considered self-referenced and major importance is placed on the ability to understand and learn new information. Task perspectives are associated with making improvements from one situation to the next, and success is derived from hard work (Duda, 1993). Emphasis is placed on competence, positive attitudes, long term accomplishments, personal satisfaction, strong work ethics, maximal motivation, and good sportsmanship. Effort is greatly valued and adaptive patterns of behavior are exhibited when challenging situations are presented.

In theory, characteristics of ego orientation are similar to task orientation as long as competency is not threatened. However, when competency is questioned by others, low achievement behaviors are elicited. When a person

is predominantly ego orientated, self-worth is tied to performance and approval of others (Ryan, 1982). Ego orientation is associated with the endorsement of rule violations, and social comparison is of major interest. Successful goal accomplishment is obtained by defeating opponents, validation is through social approval, and the overall purpose is egotistical. The focus is on winning and showing superiority over others by applying little effort .

Nicholls (1984b) proposed that ego involved perspectives lead to maladapted or dysfunctional behaviors when one's competency is questioned. Maladaptive behaviors include dropping out of competition, negative attitudes, dishonest behaviors, poor sportsmanship, selecting tasks of extreme and unrealistic difficulty, not trying as hard, and lack of persistence. Findings supporting the differences between goal perspectives have been widely reported based on data obtained in sport settings by Boyd and Callaghan (1994), Duda (1989, 1993), Roberts and Duda (1984), Duda and White (1992), Lochbaum and Roberts (1993), Newton and Duda (1993), Roberts (1992, 1993). Specific to sport environments, it was suggested that motivation is a guiding force that critically influences performance. To assess these assumptions, theorists interested in measuring motivation have attempted to evaluate achievement motivation as it related to (a) persistence, (b) effort expended, (c) task selection, and (d) motivational scales. Although these methods were not inclusive, they have been accepted as reliable methods representing behaviors from which motivation can be inferred. Each of the previously mentioned methods for measuring motivation are discussed as related to goal orientations.

Persistence

Most achievement motivation literature has viewed persistence as a motivated behavior that is defined as the number of years a person has been involved in sport, and the amount of time spent participating, which is identified as behavioral intensity (Duda & White, 1994). In an attempt to identify how goal orientation influences persistence, researchers have dedicated considerable time identifying predictors that will indicate why individuals drop out of competition. The data have revealed that individuals who drop out of sport often do so as a result of low perceived competency and a lack of sport enjoyment (ego characteristics) whereas, task oriented individuals were more likely to enjoy participation and persist longer.

Roberts (1984) pioneered research in achievement motivation and goal persistence in physical activity. His findings revealed a negative relationship between ego orientations and persistence. Task oriented conditions correlated high with continued participation, enjoyment of the sport, and high perceived competency when persistence was used as a predictor. These results have been further supported by other researchers (Duda, 1989; Duda & Tappe, 1989; Elliot & Dweck, 1988; Gauvin, 1990; Maehar & Braskamp, 1986; Nicholls, 1984; Ommundsen & Vaglum, 1992).

Elliot & Dweck (1988) found that individuals who identified with learning goals (task) persisted longer, when experiencing failure, than those with performance goals (ego), if perceived ability was low. Similar to other researchers, Duda (1992) reported that recreational athletes who emphasized task orientation, participated in their particular sport longer and dedicated more time to practice during their free time than ego involved participants.

Gauvin (1990) found that during an adherence interview, participants who exercised regularly reported participation for the sake of the activity, and that physical activity was a regular function of their lifestyle, both components of task motivation. Dropouts suggested that extraneous factors such as the perceived negative aspects of activity and social approval (ego involved characteristics) were responsible for their lack of persistence. Although there are methodological considerations that must be addressed when observing achievement motivation and persistence, (Dishman, 1988), the overall consensus reflects a strong correlation between task orientation and persistence.

Exerted Effort

Effort is another behavior that is believed to be a predictor of motivation. The general idea in sport is that a person who is highly motivated exerts greater effort or tries very hard. However, to date, because of the complexity and difficulty of measuring effort, there has been limited applied research that examines this relationship (Burton, 1989; Duda, Smart, & Tappe, 1989; Solomon & Boone, 1993).

From a social cognitive perspective, Duda, Smart and Tappe (1989) observed goal orientations and rehabilitation of injured athletes. The results revealed that participants who were task oriented worked harder on their prescribed programs when compared others. Task guided individuals pushed themselves harder during practice, while ego involved individuals were more likely to miss appointments and apply sub-maximal efforts while doing their exercises. Solomon and Boone (1993) found similar results in a study where

the task selection and motivational orientations in beginner tennis players were assessed.

Specifically, using a tennis task, Solomon and Boone examined the relationship between the difficulty of task selection, performance, and goal orientation. Their findings revealed that participants who selected the more difficult tennis skills and demonstrated greater increases in their performance were more task motivated than others.

Related, albeit inconclusive, research was conducted by Wrath and Biddle (1989). They used exploratory analysis to evaluate motivational characteristics in goal-setting with male and female participants. Using a ball throwing task, it was revealed that boys who were happier with their throwing performance had higher perceived competency, which was related to more effort being applied while performing the task. The participant's effort was determined by assessing the distance that the ball was thrown in comparison to how hard he tried. To thoroughly understand the correlation between behavioral intensity and achievement motivation additional research is necessary.

Task Selection

Motivation is the reason that an individual chooses to participate in a specific activity. Choosing a particular task reveals essential meaning or importance placed on the activity. Schneider (1984) suggested that people normally select tasks with intermediate difficulty. In doing so, this requires that participants attempt goals slightly higher than their previous performance, but still realistic and attainable. These behaviors are more pervasive in task oriented individuals. Particularly, those operating with task oriented goals seem

to chose more realistic goals that are within their ability. Alternately, those with a more dysfunctional goal orientation (ego) often select goals that are too easy or too difficult with respect to their perceived competency level. Atkinson's (1957) model has been used to explain this phenomena, which suggests that there is a linear relationship between perceived task difficulty and the anticipated affect of success and failure.

From a sport perspective, Hamilton (1974) and Roberts (1974) tested Atkinson's theory of risk taking and perceived ability. Males were tested while performing a physical task under social evaluation. It was revealed that participants with low motivation selected tasks of extreme (high or low) difficulty, and highly motivated people preferred tasks of intermediate difficulty. These results are compatible with Atkinson's theory and would lead one to assume there is a positive relationship between individuals operating under functional goal orientations (task) and task selection. Similar to Hamilton (1974) and Roberts (1974), Heckhausen, Schmalt, and Schneider (1984) suggested there is also a maturity level associated with these assumptions.

Research has revealed that children without an orientation towards a particular goal perspective often exaggerate their ability and preference for too difficult task (often children are unable to correctly estimate their ability and success). Similarly, adults with dysfunctional ego orientations may choose tasks that are too difficult or too easy to conceal their competency level and/or lack of perceived ability. To better understand the social cognitive relationship between motivation and task selection, there is a need for a more in-depth investigation to examine the connections between goal orientations and task selection.

Because of the magnitude of the perceived influence of motivation on sport performance, a need has been generated for more appropriate and sophisticated means for measuring scales. The development of scales to measure motivation in sport has received considerable attention.

Achievement Motivation Scales

There has been an extensive amount of literature dedicated to identifying the impact of motivation on performance. Several researchers (Duda & Nicholls, 1989,1992; Gill, 1993; Gill & Deeter, 1988; Roberts & Balague, 1989; Vealey, 1986) have developed scales to assess behavior from a sport-specific viewpoint. These scales have been designed with the purpose of providing quantitative methods to explain how various cognitive and social feelings related to motivation are interpreted by individuals.

Competitive Orientation Inventory (COI)

The first attempt at developing a scale to measure achievement goal orientations in sport can be credited to Vealey (1986). The COI assesses the perceived importance of winning versus performing well. The scale is presented as a 4 x 4 grid which includes playing well, a performance measure (very good, above average, below average, and very poor) and winning, an outcome measure (easy win, close win, close loss, and big loss). The method of rating is awkward and the scoring method has been criticized by Gill (1993) as being complicated. Most importantly, validity as a method of measuring specific goal orientations is questionable. For example, if an individual reports that she/he is always interested in winning and never losing, the scores would always have a high task score and low ego score without regard for actual performance.

Sport Orientation Questionnaire (SOQ)

In an attempt to provide additional insight concerning the correlation between achievement motivation and behavior Gill (1993), and Gill and Deeter (1988) developed the SOQ. Based on a series of studies evaluating clarity and validity, the scale was reduced from 58 items to a 25 component scale. Overall, findings, revealed through using the SOQ, have suggested this tool is a viable method of identifying differences in competitiveness between genders and to some extent recognizing differences between competitors and non competitors. Despite the similarities between the SOQ and achievement goal theory, the underlying constructs of the SOQ were not based on the achievement goal theory and therefore, should be regarded with caution when used to determine goal orientations (Duda, 1992; Marsh, 1994; Roberts, 1996). Particularly, the fundamental question in achievement goal theory is perceived competency which is not addressed by the SOQ.

Correlational analysis were performed using the SOQ and Task and Ego Orientation Sports Questionnaire (TEOSQ). Duda (1992) reported a stronger positive relationship between the competitive factor and win sub scale of the SOQ and ego portion of the TEOSQ than the sub scales of the competitive factor of the SOQ and task portion of the TEOSQ. Similarly, Marsh (1994) did not find a good fit between the sub scales of the SOQ and the POSQ. The task sub scale of the SOQ was highly correlated with the mastery factor of the POSQ. Only a moderate correlation was identified between the SOQ win sub scale and the POSQ competitive scale. Marsh suggested that clarity is needed on the SOQ to distinguish whether competition is relative to self or others.

Task and Ego Orientation Sports Questionnaire (TEOSQ)

Researchers in sport revealed that participants' perceptions of their demonstrated competency plays a major role in achievement behavior (Lochbaum & Roberts, 1993; Newton & Duda, 1993; Roberts, 1992; Roberts & Duda, 1984). It has also been revealed that goals are based on improvement through mastery as well as competition (Duda 1987; Roberts, 1984, 1992). In line with these findings, Duda and Nicholls (1989) and Roberts and Balague (1989) developed scales with the specific purpose of measuring task and ego orientation in sport.

The TEOSQ is a modified version of a scale that was previously designed by Nicholls and colleagues (1989) to measure task and ego goal orientations in academic settings. The scale contains 13 items that load on two factors (task and ego). To date, this questionnaire has been used more extensively in qualitative and quantitative research in sport settings than all other scales. The popularity of the scale is due in part to the comprehensive methods of establishing validity and reliability, and the lack of additional suitable measures.

To assess the validity of the scale, the TEOSQ was administered and counter-balanced with Nicholls' academic goal orientation scale (Duda & Nicholls, 1989). The results revealed a significant correlation between the sport and academic questionnaire on matched items. Duda and Nicholls (1989) found further validation for the TEOSQ when they conducted a correlational analysis using similar factors of the COI (Vealey, 1986) and the SOQ (Gill & Deeter, 1988). However, the competitive factor of the SOQ weighed heavier with the ego portion of the TEOSQ than on the task factor. These findings are

not surprising when the underlying premise defining the different goal orientations are taken into perspective. Differences were not observed between the COI playing well and task or ego orientation of the TEOSQ. In relation to goal orientations, there is no proof that individuals functioning under different orientations have unique preferences for performance. The TEOSQ is reliable and valid and has been used in a large body of research contributing to the current understanding of the role of achievement motivation and sport. However, realizing that academic and sport constructs are different, Roberts and Balague (1989) recognized the need to develop a scale uniquely generated within the context of sport.

Perception of Success Questionnaire (POSQ)

The POSQ is a motivational scale developed by Roberts and Balague in 1989. To date, this is the only scale designed to measure task and ego goal orientations that originated within the context of sport. Recent research has shown this scale to be a reliable and valid tool for measuring achievement goal orientations in sport. Because of the aforementioned reasons, this scale adequately represents the constructs under investigation and, therefore, was used as the basis for determining individual goal orientations in this research.

As suggested by Nicholls (1989), Roberts and Balague (1989) prefaced the questionnaire by asking participants their perception of success in order to measure task and ego orientation. After a large pool of questions were generated, the scale was administered to a large sample of athletes. As expected, factor analysis procedures resulted in a two-dimensional factor structure, one task and the other ego. The current scale has been reduced to 12 items, and each item was included because it loaded highest on one

orientation and lowest on the other. To address issues related to validity, Roberts and Balague (1989) compared scales of the POSQ and COI (Vealey, 1986) and the TEOSQ (Duda & Nicholls, 1989). Correlational analyses between the POSQ and COI were not significant. These findings may lead one to believe that the scales are measuring different orientations. Good psychometric properties have been established using the TEOSQ, and correlational analyses between the POSQ and TEOSQ on similar factors were strong (.80 ego and .71 task). Considerable research has been generated that provides support for the POSQ as a reliable and valid tool for measuring task and ego orientation in sport (Marsh, 1994; Roberts, 1996; Roberts & Balague, 1989; Treasure & Roberts 1994).

Understanding Motivation from Different Perspectives

Research based on a social-cognitive perspective of achievement motivation has revealed that a persons' goal orientation may be related to other motivated feelings, such as IM, SE, and attributions. Studies have been designed to examine the influence of these variables when compared with goal orientations.

Intrinsic motivation (IM)

Voluntary engagement in an activity for its pleasure and enjoyment, without external influences, describes intrinsic motivation (Deci, 1975). Researchers have identified IM as a valuable component of sport performance. However, Deci (1975) proposed that IM alone is not necessarily sufficient to predict successful performance. Instead a person's perceived contingency influences inherent responses. Similarly, Deci and Ryan (1985) and Roberts (1992) agree in suggesting that IM is greatly influenced by the value placed on

the desired task, perceived competency, and determination. Researchers have found that participants were more intrinsically motivated following activities in which they felt competent and had successful experiences as compared with less successful events (Vallerand, 1983; Vallerand & Reid 1984; Weinberg & Ragan, 1979). In an attempt to incorporate IM into a more comprehensive theory of motivation, research has been conducted to test the relationship between achievement motivation and IM in academic and sport settings.

Based upon a social cognitive position, it is believed that achievement motivation influences intrinsic motivation. Specifically, it has been suggested that task goal orientation will increase IM perspectives in performance, whereas a person operating under ego goal direction is motivated by exhibiting superior performance over others. The latter behavior will lead to less pleasure when one's ability is questioned, and may possibly lead to a decrease in IM (Duda, 1992; Dweck 1986). However, these findings are still inconclusive. Deci and Ryan (1985) posited that when individuals have positive opinions regarding their performance, they are more likely to have higher levels of IM as opposed to negative beliefs about their abilities. Further, McAuley and Tammen (1989) found that negative feedback (losing) only affected IM negatively when perceived competency was threatened or subjective interpretation was at risk.

Lepper and Green (1975) indicated that the over-emphasis of extrinsic rewards diverts motivation from the actual activity (task characteristics) by undermining the intrinsic award and as a result, motivation is redirected to more external factors. Particularly in sport, these findings are in accord with the body of literature concerning the relationship between achievement motivation and intrinsic motivation.

In a recent study by Goudas, Biddle, Fox, and Underwood (1995), when two different teaching styles were used (direct and differential) to teach track and field events, students in the differential style group reported greater IM and task orientation. Similarly, Lloyd and Fox (1992) found that when externally referenced teaching techniques were used in a physical education program, students had significantly increased ego orientation scores and less intrinsic motivation. These findings suggest a positive relationship between IM and achievement motivation.

Self-efficacy(SE)

The term SE has been used as a method of clarifying questions associated with achievement motivation, particularly in academic and sport environments. Bandura (1977,1982), and Feltz (1992) described SE as an on-going process of explaining competency, that is modified depending on feedback obtained from environmental factors, previous experience, and cognitions relating to performance. Self-efficacy deals with how proficient an individual feels in an attempt to carry out specific tasks and produce desired outcomes. To further explain the underlying constructs of SE, Bandura (1989) stated that SE could be influenced by four major sources of information; (a) performance accomplishments, (b) vicarious experience, (c) verbal persuasion, and (d) physiological arousal.

Performance is considered the most significant source influencing efficacy because it provides the greatest amount of information. For example, if a task is of reasonable difficulty, a person who repeatedly perceives performance as being successful will have greater SE than a performer who regards herself/himself as a repetitive failure due to unsuccessful experiences.

To distinguish between the influence of various modeling techniques on SE, Feltz, Landers, and Raeder (1979) compared participant modeling to a video display and live modeling. Their findings revealed that subjects participating in the performance modeling scenario had greater efficacious feelings than subjects using other modeling techniques. However, vicarious experience has been found to impact efficacy.

According to Bandura (1989), another method of influencing SE is through vicarious experience, which is accomplished through observation (modeling) and social comparisons. Though not as informative as physical performance, McAuley (1985) found that watching others demonstrate gymnastic skills provided comparative information and actually enhanced the observer's feelings of SE and performance. Verbal persuasion has also been found to influence SE.

Verbal performance is often used by coaches and instructors as a method of motivating students. This technique of efficacy enhancement does not impact SE as much as other methods because other concerns, such as how confident the performer perceives the ability of the overseer to provide information, influences how verbal persuasion is accepted.

Bandura's last source of efficacy information is based on the performer's psychological state. Psychological status on SE has received minimal attention in sport settings. However, it has been suggested by Bandura (1986), Bandura and Adams (1977), and Feltz and Rieglinger (1990), that a person's interpretation of their psychological states as they relate to heart rate, perceived difficulty, muscle soreness, arousal, anxiety, fear, fatigue, and stress may influence efficacious opinions.

In sport settings, the majority of research involving SE has been related to exercise adherence and performance (Garcia & King, 1991; Martin & Gill, 1991; McAuley & Jacobson, 1991). Results have revealed a moderate-strong correlation between SE and performance in sport settings (Feltz, 1992; Wurtele, 1986). However, several concerns have been raised about how SE should be measured, particularly due to different designs, questionable methodologies, and variations in measuring efficacy. Nevertheless, most research (albeit only moderate in many circumstances) revealed that SE, combined with knowledge and adequate skill levels, can predict physical behaviors and thus, should be observed as a integral part of sport performance and motivation.

Literature related to sport revealed that SE increased as a result of exercise adherence. For example, McAuley (1992) reported that success or failure in previous experiences greatly influenced SE. The amount of adherence or persistence was directly related to efficacious beliefs. The stronger the perceived SE, the longer and harder participants continued to attempt the difficult task or obstacle. There appeared to be a strong correlation between the amount of behavioral change and SE. Overall, the effects of SE are more clearly observed when there are extreme circumstances and the activity is meaningful to the participant. Feltz (1992) suggested that social comparisons, experiences, and perceived failure resulted in decreased efficacy, whereas success increased SE.

Feltz (1988) evaluated the correlation between SE and actual performance to measure changes in cognition. It was determined that SE only partially influenced sport participation, and as the activity continued, actual performance was a stronger indicator of SE. Similar results have been

observed in sport related contexts (Chi, 1993; Jourden, Bandura, & Banfield, 1991).

Jourden, Bandura, and Baffled (1991) assessed the relationship between SE and motivation using a pursuit rotor task. Groups were given differential feedback concerning acquisition of the skill. Participants who were led to believe that the task was an acquired skill reported more SE, greater performance, and more task motivation. Individuals who were told that skill acquisition was based on innate abilities reported less SE, minimal increase in performance, and little appreciation for the task.

Using physical fitness tasks, Chi (1993) found support for a positive relationship between SE and task orientation. Regardless of performance, participants who were task orientated reported greater SE than ego involved students. Ego involved participants who received failure feedback indicated reduced levels of SE.

Additional research is needed regarding methods to adequately isolate and measure SE and the relationship between achievement motivation, particularly goal orientations. Investigations are also needed to assess whether SE is affected when changing an individual's goal orientation. If an affect is observed, sport practitioners should be made aware of the implications for instruction related to how performance and feedback influence efficacious beliefs.

Attributions

Attributions are self-explanations or rules that a person uses in an attempt to explain the cause of specific behavioral outcomes (Roberts, 1992). The guiding presumption associated with attribution theory proposes that

casual interpretation given to explain success and failure guides an individual's expectations and subsequent behavior (Weiner, 1974). Weiner (1985) identified three casual dimensions: locus of causality, stability, and control, to assess attributions.

The locus of causality dimension explains whether success or failure is perceived as something internal or external. Stability as a component of attribution is related to determining whether the cause of success or failure is something that is constant or variable over time. The final dimension is controllability, which questions whether or not the participant is able to control the cause of the results. To further explain the theory of attribution, Weiner (1980) identified four major attributions (not conclusive) associated with achievement behaviors as ability, effort, task difficulty, and luck. Each dimension is classified along "locus of causality". For example, the dimension of stability is broken down into a 2 x 2 model. Cells are either stable or unstable and related to internal factors based on effort or ability, or external factors that are associated with task or luck. The overall assumption associated with attribution theory is that functional individuals will attribute success to situations that can be changed through effort and hard work. For additional information, see Weiner (1985).

The use of attribution theory as a method of studying motivation has been conducted by controlling the participant's success and failure experiences. A general assumption in sport is that winning and losing are direct determinants of success and failure. However, Roberts and Duda (1984) Maehr and Nicholas (1980), and Spink and Roberts (1980) reported that an individual's psychological interpretation of performance is a better indicator of success and

failure than outcome scores. To illustrate, an intermediate player in any sport may perceive almost winning against an elite player as a successful experience without actually winning. In a similar manner, elite competitors who win may consider their performance unsuccessful because they felt that their performance did not match their actual potential. Therefore, in order to measure success, it is imperative that a person's casual attributions are known.

Roberts and Pascuzzi (1979) investigated the assumptions of the four elements, ability, effort, luck, and task difficulty, to explain attribution. They found that other factors attributed to performance beyond those proposed by Weiner, and suggested that future attributional research in sport be directed towards situations or feelings related to the particular sport. In sport, research related to achievement goal orientations and attributions reveal that task orientation characteristics are associated with emphasis on effort, whereas ego involved orientation is related to ability (Duda & Chi, 1989).

Using a basketball task, Duda and Chi (1989) investigated the relationship between goal orientations and attributions. Specifically, a class was divided into two groups, task versus ego oriented. The ego oriented group was comprised of males who were instructed to compete against students of similar skill level in a one-on-one basketball competition. The winner was identified as the first person to reach 12 points. The task motivated group was instructed to play one-on-one basketball for a specified length of time. They were falsely informed that no loser or winner would be identified. Following competition, all participants were instructed to rate their performance in relation to effort, their perceived basketball skill, their opponents skill level, and any lucky breaks.

The results revealed that more winners perceived their skill level as having more of an affect on their performance than losers. Losers believed that their opponent's skill level influenced their game. Also, losers with ego orientation as compared with those in the task involved group, were less likely to attribute their performance to effort. Although these findings have contributed to the literature examining goal orientation and attributions, research is still in the preliminary stage and will require further investigation. Specifically, research is needed to assess how people (not environment) with different goal orientations, task or ego, respond to success and failure treatment in practice and competitive settings.

Concluding Remarks

After reviewing the literature, it is apparent that interest in achievement motivation has recently flourished in academic and sport settings. The majority of research were dedicated to how different goal orientations might influence academic progress. But, in sport and the physical domain there is still sufficient research that supports two distinct goal perspectives influencing how individuals are motivated. Major emphasis in sport has been directed to discovering whether task and ego orientations exist and how different environments may influence orientations. The literature mentioned in this review is pertinent in confirming that different goal orientations exist and are influenced by environmental factors. However, there is a need for more in-depth investigations to discover how individuals with different goal orientations are influenced independently within sport, under various situations that are a part of sport participation.

In goal orientation literature it was suggested that task orientation is always preferred over ego goal perspectives. Furthermore, it (task orientation) is referred to as a stable construct, which means there should be little or no change in this orientation regardless of the circumstances. To make these claims, it is necessary to test the theory under different experimentally manipulated situations. Based on the current body of literature, influence of the following circumstances are not yet determined. The salience of identifying individuals who are high and/or low in either goal orientation. Are the numbers sufficiently large enough to merit investigations? Does a person's goal orientation change when confronted with positive (success) or negative (failure) feedback? Is it possible for goal orientations to change between practice and competitive situations? These questions have not been clearly addressed in the theory of goal orientation and are therefore pertinent for this investigation.

As mentioned in this review, there is a trend toward determining how goal orientations influence other feelings and behaviors. Although, IM, SE, and attributions are not the only feelings associated with motivation, there is an abundance of literature suggesting these are important variables associated with determining how people are motivated. Most of these conditions are presented in the literature independently, which contributes minimally to the development of a comprehensive theory of motivation. Therefore, this investigation may provide data that help to establish a multifaceted theory explaining the relationship between goal orientation and other self-perceptions concerning behaviors. Further investigations may provide coaches, teachers, and other sport practitioners with valuable information relating to teaching,

coaching, and assisting in facilitating the attainment of optimal motivation.

Methods for a study of this type are presented in Chapter 3.

CHAPTER 3 METHODS

This investigation was designed to examine a part of goal orientation theory by testing whether task or ego goal perspectives might shift when under the influence of simulated practice and competitive conditions. Procedures included presenting experimentally manipulated success and failure feedback to the participants. To answer the proposed questions, participants responded to success/failure feedback that was based on fictitious norms during practice, and won/loss feedback from one-on-one basketball for competition.

Participants

Sixty-eight male volunteers between 19 and 24 years of age were recruited from the University of Florida student population to participate in this study. Initially, eligibility of participants was determined based upon their responses to a basketball activity demographic questionnaire (Appendix A). Subject selection was also based on their Perception of Success Questionnaire (POSQ) test scores (Roberts & Balague, 1989) (Appendix B). Individuals were randomly assigned into either one of six task or ego orientation groups depending upon their POSQ scores.

To identify specific achievement goal orientation groups, the task and ego motivation questions of the POSQ were divided into two sub-scales. Criteria for establishing placement in high task or high ego treatment conditions were based on mean scores and standard deviations for both task and ego goal orientations. These scores were established during pilot testing using 200

males who had previously competed in organized sport during high school and/or in college. Scores for the POSQ ranged from 1-5, with a lower score indicating higher characteristics of the goal orientation being assessed and a high score was indicative of the opposite. To be classified as having a high goal orientation, individuals had to score 1/2 SD below the mean in one goal orientation and score at the mean or higher on the other orientation. The resulting criteria for classification as ego oriented was 2.01 or lower on ego items and 2.1 or higher for task items. Similarly, standards for classification as task oriented was 1.77 or lower on the task items and ego scores of 1.50 or higher. Following screening for task and ego orientation, a stratified random assignment was used to place participants into treatment conditions. These conditions were identified as task success, task failure, task control, ego success, ego failure, and ego control.

The number of participants assigned to each treatment condition was based on Cohen's (1977) table of power. The parameters along with their respective values in the table were as follows: $\alpha = .05$ (level of significance), $u = 5$ (K-1) (treatment groups), $f = .40$ (large effect size), and a power of .71. According to the above specifications, the number of participants assigned to each group was 12.

Tasks

Four different tasks were executed to satisfy the requirements of this investigation. In all situations, tasks were completed on a regulation sized basketball court and with a regulation size basketball. A stopwatch was used by the experimenter to monitor the duration of each trial block, and 12 in cones

(30 cm) marked the obstacle course and shooting locations for the shoot and rebound task.

The first task completed was the basketball screening task. Afterwards, either the dribble and shoot obstacle task (DSOT) or the shoot and rebound task (SRT) were administered using a counter-balanced order. The final task was one-on-one competition in a modified game between individuals of similar skill. Participants in the success and failure treatment conditions competed against each other, and the control groups played one another. Additionally, individuals in the control groups wore heart rate monitors as they played a game. Controls were instructed to focus on their physiological responses and to disregard scores because they were not important.

Screening Task

Treatment groups were divided into high and low skill categories based on their screening test scores. This information was used for matching opponents in the one-on-one basketball competition/game. The objective of the screening task was to make as many points as possible from three different shooting locations on a basketball court. The first shot attempt was taken from the top of the key (worth 3 points). The next attempt was from the free throw line (worth 2 points), and the final shot in the trial was a lay-up from either side of the goal (worth 1 point) (Appendix C). It was possible to obtain 6 points during each trial block. Points were awarded only for successful shots. A total of 6 trial blocks were attempted for a maximum score of 36 on the entire task. Participants with scores between 1-18 were placed in the low scoring group and those with scores ranging from 19-36 were placed in the highly skilled

group. No rest periods were given between trial blocks and completion of this screening task took approximately 5 min.

Dribble and Shoot Obstacle Task (DSOT)

The objective of the DSOT was to complete as many circuits as possible during each timed trial block. When performing this task, participants started by dribbling a basketball through a series of cones starting at a previously determined line 21 ft (6.4 m) diagonally (45°) from the basket (Appendix D) .

Six cones were spaced 3 ft (.91 m) apart in a straight line, making the total distance traveled 18 ft (5.49 m). The first cone placement was 3 ft (.91 m) in front of the starting position and the 6th cone was 3 ft (.91 m) from the basket. Participants dribbled the ball, using only one hand, through a series of cones while following a preset weaving pattern of travel. If a person departed from the set pattern or knocked down a cone, he was required to return to the point of infraction and correct the error, while the clock continued to run. Once the last cone was cleared, the individual was required to make a goal, using a one hand shot, from a set point located 3 ft (.91 m) from the basket.

If the shot was missed on the first attempt, he was instructed to continue rebounding the ball and shooting one hand shots from the previously missed shooting location until a goal was made. After each goal was accomplished, he dribbled the basketball back to the starting position and repeated the above maneuvers. Three 1 1/2 min trial blocks were completed using these procedures. Participants were given a 2-min rest following each trial block. To score this task, treatment groups were informed that they were competing against previously established norms and their score was based on the

average of the number of shots taken and the number of trials completed during the three 1 1/2 min trial blocks.

Shoot and Rebound Task (SRT)

The objective of the SRT was to finish three timed trial blocks as quickly as feasible, while taking as few shots as possible. When completing this task, participants began shooting from number 1 of 5 predetermined spots. The location of these spots were arranged in a U-shape pattern around the 3-second area of the court, ranging from 4 ft (1.21 m) to 25 ft (7.6 m) away from the goal (Appendix E). After a player shot the basket from the initially assigned spot, he rebounded the basketball. There were three opportunities to make a goal at each specified location. After a goal was made or the last unsuccessful shot was taken at a designated spot, the participant moved to the next successively numbered spot in the pattern and carried out the same procedures as explained above.

During every trial block, these procedures were continued at each position until a basket was made or the participant had made 3 unsuccessful attempts. A trial block consisted of a complete rotation through the 5-spot pattern, meaning that it was possible to make 5 goals and attempt 15 shots during one trial block. Scoring this task was similar to the DSOT. Participants were told that their score was based on the average number of shots taken, the number of successful goals completed and the average time taken to complete the trial blocks. This information was recorded for each group.

One-On-One Competition

The purpose of this task was for the success and failure treatment groups to compete against individuals of similar skill levels (high or low) while attempting to out score their opponents in a basketball competition. They played a 12-point game of one-on-one basketball. If the competition took longer than 8 min a rest period of 2 min was given. The ball was put into play by having the opponents compete for a jump ball that was tossed by the experimenter. When a player made a basket, he maintained possession of the ball for the beginning of the next play. Following a successful shot attempt the ball was taken out and checked-in around the three-point area. Anytime the defensive player rebounded the basketball following an unsuccessful shot attempt by the offensive player, the ball had to be taken back to the three-point line before beginning the next play. If a player attempted a goal and the ball never contacted the rim, the ball was considered live and whoever rebounded the ball continued play.

Each time a player made a basket, 2 or 3 points were added to his overall score. Two points were awarded for shots within the three point area and 3 points were given for shots beyond that location. In the event of a foul, called by the experimenter or either player, the fouled player received one free throw attempt and maintained possession of the ball for the next play. One point was awarded for successful free throws. During the game an offensive player was allowed to shield the ball using his body only as far as the three-second area. Afterwards he was required to turn and face the goal prior to attempting a shot (a bigger player could not use his size for an unfair

advantage). These procedures were continued throughout the game. Violations and fouls were called by the experimenter. All other rules and regulations used were governed by the guidelines of standard basketball play.

Treatments

Interventions occurred in two simulated practice conditions and one competitive situation. During the practice conditions, success/failure treatment groups were led to believe that they were competing against norms (bogus). Although norms were involved, the SRT and DSOT were considered practice settings since participants systematically worked by themselves to accomplish a desired outcome. During practice conditions, the control groups were given scores relating to their performance and general information regarding basketball.

The competitive aspect of this investigation involved two participants competing against each other during a modified basketball game. In this setting, individuals in the task and ego success and failure treatment groups competed with each other resulting in a won/loss outcome. The control group followed similar instructions, but did not focus on scoring.

Success and Failure Treatment During Practice

Specific instructions for the success and failure treatment conditions were provided to inform participants that they were competing against previously established norms (Appendices F, G). In the instructions, it was explained that the norms were established through collaboration between several basketball coaches. The treatment groups were lead to believe that the norms for the SRT and DSOT were established by using male recreational

basketball players who attended universities throughout the state of North Carolina. To substantiate that norms really existed, the experimenter pretended to obtain scores from a chart of numbers that could be seen by players from a distance.

Following each series of trial blocks on the SRT and DSOT, success and failure treatment groups were provided feedback indicating that their performance was above or below the 50th percentile, according to the previously established norms. Each treatment group, depending upon their group assignment, received only success or failure feedback following the practice tasks.

While performing the SRT, participants were informed that the norms were established by critiquing male recreational basketball players' shooting precision and speed. Therefore, time and the number of shots taken were considered for performance feedback. Participants were informed that feedback was based on the average time of the 3 trial blocks and, the average number of shots attempted during each trial block. To mask performance, feedback was given as percentile scores. Success groups received percentile scores between 70%-85% based on their actual performance. Failure treatment groups were given scores between 30% - 45%.

Success and failure treatment groups were told that the norms for the DSOT were based on the average number of trials completed during each 1 1/2 min time period. Following the completion of 3 trial blocks, treatment groups were given feedback indicating success or failure on the task. Feedback was provided depending on the average number of trials completed. Success

treatment groups were informed their scores were better than the average player and they received percentile scores ranging between 70% - 85% based on their actual performance. The failure treatment groups were told that the average number of completed trials per trial block were below the average and given percentile scores ranging between 30% - 45%. From pilot testing, it was established that the fastest individuals completed approximately 9 trials per trial block. Therefore, the failure treatment groups were told that the average number of trials completed per trial block was 11.5.

Control Treatment During Practice

Following completion of the DSOT and the SRT, both task and ego participants in the control groups were given an average score for their actual performance and received general information concerning basketball (Appendices H, I). Feedback was related to skills involved in the task during respective trial blocks.

Success and Failure Treatment During Competition

Individuals competed with others identified as having similar skill levels. Placement for competition was based on scores obtained during the screening task. Treatment was the actual competition results between players and was based upon winning or losing. Scores were revealed and at the end of the game a winner and loser was confirmed. Therefore, following the competition 50% of the treatment groups were identified as winners (success) and the other half were considered losers (failure).

Control Treatment During Competition

Individuals played against other control group participants with similar or different goal orientations and comparable skill levels. Placement for competition was based upon the screening task scores. Players were informed that they were playing for physiological assessment and they were further instructed that scores were not important. They wore heart rate monitors to act as a method of distraction and to keep them from focusing on scores. Prior to the beginning of the game individuals were asked to check their heart rate. Periodically during the game and following a successful goal attempt players were asked to reveal their heart rates, and to rank how tired they felt, based on a scale from 1 to 10. A score of 1 indicated not tired at all and 10 denoted extremely tired. The experimenter discretely recorded the players scores during the competition. However, winners or losers were not identified following the game. In reality, 50% of the players were identified as winners or successful players and the other half were consider unsuccessful participants.

Questionnaires

For this investigation, the POSQ was administered to identify goal orientation. Afterwards, a series of questionnaires were given to assess self-efficacy, intrinsic motivation, and attributions. Performance scores were recorded during each task.

Perception of Success Questionnaire (POSQ)

The POSQ is an instrument designed to measure specific achievement goal orientations in a sport-specific context. This instrument was derived from a larger pool of 48 questions that were reduced to the current 12 item scale,

which consists of 6 task and 6 ego items (Roberts & Balague, 1989). Responses were based on “I feel ...” questions. Each question was ranked on a 5-point Likert scale, based on a continuum beginning with strongly agree (1) and ending with strongly disagree (5). To score the POSQ, the 6 items representing a specific goal orientation was summed and averaged. Since there were 6 items representing each scale, the sum of a person’s goal orientation for task and ego orientation ranged from 6 to 30. Afterwards, means were established for each goal orientation. Low averages indicated that a person’s perception of success was high in that particular orientation.

Self-Efficacy

Based on Bandura’s (1986) microanalytic approach to assessing self-efficacy, participants responded to 10 items representing a number of basketball skills associated with each task (SRT, DSOT, as well as one-on-one competition) (Appendices J, K, L). Items were listed according to the degree of difficulty, with easier skills coming first. Using a percentage score ranging from 0% to 100%, individuals rated each item according to his confidence for successfully completing the listed items. Following treatment, respondents indicated how certain or confident they were in actually accomplishing a specific skill.

A rating of 100% indicated absolute confidence in performance, whereas a response of 0% represented no confidence in the ability to successfully execute the skill. Perceptions of self-efficacy were calculated by totaling the certainty rating of each item, then dividing that score by the total number of

items on the scale. Since there were 10 items, a person's self-efficacy rating ranged between 0% to 100%.

Intrinsic Motivation Inventory (IMI)

The IMI is an instrument designed to measure levels of intrinsic motivation (McAuley, Duncan, & Tammen, 1989; Ryan, 1982). This scale has 16 generic items that were modified to fit the task of interest (Appendices M, N). For example, "I enjoy the activity ...", was changed to "I enjoy basketball...". The 16 item inventory was divided into 4 dimensions that are related to intrinsic motivation; (a) interest-enjoyment - "I enjoy this activity...", (b) perceived competence - "I think that I am good at ...", (C) effort- importance- "I put a lot of effort into ...", and (D) tension-pressure - "I felt tense while playing ...". Good reliability and validity coefficients for the IMI has been obtained in sport specific environments for each of the named dimensions. The items were scored on a 7-point Likert scale, 1 = strongly agree and 7 = strongly disagree. The negatively worded items were re-scaled prior to data analysis, and the sum of scores were calculated for each dimension. Since there were 4 items representing each dimension, sums of scores for each sub-scale ranged between 4 - 28.

Casual Dimension Scale-II (CDSII)

To measure changes in attributional styles under different experimenter-manipulated conditions, the CDSII (McAuley, Duncan, & Russell, 1992) was administered (Appendix O). Initially, responses were made to an open-ended question asking individuals to make an attribution relative to their performance on a previously performed task. Afterwards, this response was utilized to

answer each of the 12 items on the CDSII. The 12 items are presented on a 9-point Likert scale which ranges from having complete control (9 points) to having no control (1 point). The attributions are based on the following dimensions: (a) locus of causality, (b) personal control, (c) stability, and d) external control. There were three questions representing each of these dimensions. Since responses were based on a 9-point Likert scale, the sum of individuals' scores ranged between 3 - 27 points on each dimension. To measure attribution styles, scores from each of the identified dimensions were summed and averaged. These scores determined whether a participant perceived that his performance was based on internal controllable or uncontrollable factors, external controllable or uncontrollable factors, internal stable or unstable factors, or external stable or unstable factors.

Performance

Performance scores were obtained from the actual scores made by participants on the SRT and DSOT scales, as well as the one-on-one competition. Scores were not important for analysis, however, they made the research appear more realistic and believable. Speed and the number of successful goals were used to measure performance on the SRT. Speed was calculated by recording the time expired for each trial block. Baskets were scored by recording the average number of goals attempted and the number of successful shots per trial block. Performance on the DSOT was determined by summing the average number of trials completed during the 1 1/2 min time spans. The one-on-one competition performance scores were obtained by recording the number of points scored by each player.

Procedures

The initial step for conducting this investigation was to obtain approval from the Institutional Review Board of the University of Florida (Appendix P). After approval was granted, participants were recruited from the University of Florida student body. During the initial visit, general information concerning the experiment was provided. Those persons who were interested in the experiment were asked to complete a basketball demographic form for a brief history of their basketball experience and details concerning background information regarding past involvement in sport. After demographic forms were completed, the respondent was required to meet the guidelines established for the POSQ. If these criteria were met, he was randomly assigned into his respective task or ego treatment condition. Qualifying individuals were contacted and appointments were set. All testing took place in the Florida Gymnasium.

Individual testing was conducted in 3 sessions over an average of a 3 week time period (Appendix Q). The total time commitment for participation was approximately 2.5 hours. The initial meeting lasted approximately 75 min, the second was about 45 min, and the final session was completed within 30 min.

Meeting One

Upon arrival at Florida gymnasium, participants were provided a brief overview concerning the procedures for this investigation. Each treatment group began the experiment by reading and signing the informed consent. This form provided a short description of the research project (Appendix R).

Afterwards, treatment groups received standard verbal instructions explaining the procedures to be followed for the screening task (Appendix S). There was a brief (2-min) warm-up period before beginning the task. Individuals were encouraged to attempt long and short shots while warming-up, since both were included in the task. After warm-up, participants completed the screening task. Following screening, there was a 2-min rest period then the POSQ, IMI, SE, and CDSII questionnaires were completed. The experimenter reviewed instructions for each questionnaire and checked for understanding after a response was made on each first item. After the questionnaires were answered, treatment groups completed the DSOT or the SRT depending on the counter-balanced order. Standard verbal instructions for each exercise were provided prior to beginning the task.

After instructions were given for the DSOT, the experimenter checked for understanding by having each participant demonstrate one trial of the obstacle task. They completed three 1 1/2 min trial blocks with a 2-min rest between each trial block. During the rest period subjects were informed that they could sit, take a drink, or continue working on the drill. There was no dialogue between the experimenter and participant during this time. Once the final trial block was completed, depending on the treatment group, success, failure, or general feedback was provided (Appendices T, U, V). Questionnaires were administered to assess self-efficacy. There was a 2-min break following the completion of questionnaire and beginning of the second task.

To begin the SRT, participants were given standard instructions. Understanding was confirmed by having them stand within one foot of the

circumference of the first cone and demonstrate one trial of the task. Afterwards, 3 trial blocks of the task were completed while following the same procedures for rest periods as described for the DSOT. Once the last trial block was accomplished, treatment groups were given success, failure, or general feedback concerning their performance, and the POSQ, SE, IMI, and CDSII questionnaires were administered. After the questionnaires were completed, an agreed upon time was scheduled for the second meeting. The second meeting took place approximately 1 week following the initial meeting.

Meeting Two

Procedures for the second meeting were similar to the first meeting. Again, participants were provided a brief overview regarding the procedures for the session. The POSQ was administered prior to beginning the initial task. Following the same procedures as the previous meeting, treatment groups began the SRT or the DSOT, depending on the counter-balanced order. Standard verbal information regarding the tasks were reviewed (Appendix W). Participants again experienced 3 trial blocks on each task. There was a 2-min rest between each trial block.

Following the last trial block of the each task, individuals were given feedback appropriate to their treatment group and completed the POSQ, IMI, SE, and CDSII questionnaires following the last task. Feedback for each treatment group was consistent with the initial group assignment during the entire practice phase of the experiment (Appendices T, U, V). For example, participants received only success or failure feedback on the SRT and the DSOT during the 2 meetings. Following the treatment session, an appointment

for the next meeting was arranged. The time span between meetings two and three was approximately 1 week.

Meeting Three

To begin the third meeting, players were introduced and a brief overview of the procedures for the session was explained. Prior to the one-on-one competition, players were asked to complete the POSQ. Opponents were separated when answering all questionnaires.

General instructions regarding the one-on-one competition was provided for the success and failure treatment groups before beginning the task (Appendix X). Similar instructions were given to the control treatment groups (Appendix Y). Prior to the first trial block, leading questions related to the rules of the game were asked to ensure that each person knew what was expected of him. Before the competition started players were encouraged to warm-up and afterwards play began by having them compete for a jump-ball. During the rest period (if applicable), they were instructed not leave the gymnasium or have a conversation with anyone. Players were allowed to get a drink, continue to shoot around, or have a seat. To begin the next play, the person who had the ball prior to the break maintained possession.

Following the end of the competition a winner and loser was confirmed for the treatment groups. All participants were asked to complete the POSQ, IMI, SE, and CDSII questionnaires. They were separated while completing questionnaires and supervision answering questions was counter-balanced between winners and losers. After completing the questionnaires, subjects were thanked and asked to provide their current address. A debriefing letter

was mailed, after the last participant completed the third and final meeting, (Appendix Z).

Design and Analysis

The research design for this investigation was a randomized groups design with the independent variables being groups, feedback, and trial blocks. The six treatment groups were: (a) task success, (b) task failure, (c) task control, (d) ego success, (e) ego failure, and (f) ego control. Each dependent measure was analyzed separately by using the data obtained in the practice and competitive settings.

The four dependent measures were: (a) goal orientation, (b) attributions, (c) intrinsic motivation, and (d) self-efficacy. Analysis of variance calculations were used to analyze data and identify main effects and interactions. Follow-up was with Tukey's Honestly Significant Difference (HSD) as needed. Tests for simple main effects were used with significant interactions. An alpha level of $p < .05$ was utilized to identify significant findings.

Practice Sessions

Goal orientations. Separate analyses were conducted to examine task and ego goal orientations. The POSQ was administered once prior to the first meeting and 4 times during the practice sessions. Data were analyzed using a 6 X 5 (Groups x Trial Blocks) factorial ANOVA with repeated measures on the last factor.

Attributions. The CDSII questionnaire was administered 3 times during the practice sessions. A 6 x 3 (Groups x Trial Blocks) factorial ANOVA with repeated measures on the last factor were used to analyze practice data.

Intrinsic motivation. The IMI was administered 3 times and analyzed using a 6 x 3 (Groups x Trial Blocks) factorial ANOVA with repeated measures on the last factor.

Self-efficacy. Micro analysis of each task was used to measure self-efficacy. Variations of this scale were administered 5 times during the practice sessions. Data were analyzed using a 6 x 5 (Groups x Trial Blocks) factorial ANOVA with repeated measures on the last factor.

Competitive Session

Goal orientations. The POSQ was administered once prior to the first meeting and two times during the one-on-one competition. Data were analyzed using a 6 x 2 x 4 (Groups x Feedback x Trial Blocks) factorial ANOVA with repeated measures on the last factor.

Attributions, intrinsic motivation and self-efficacy. Questionnaires for each of the dependent measures were administered one time during the one-on-one competition. Data were analyzed separately, using a 6 x 2 x 2 (Groups x Feedback x Trail Blocks) factorial ANOVA with repeated measures on the last factor. Baseline measures were contrasted with competitive responses.

CHAPTER 4 RESULTS

Separate ANOVAS were calculated on the dependent variables to determine whether changes in practice and competitive conditions occurred during this investigation. Significant interactions were examined by testing for simple main effects. When applicable, Tukeys Honestly Significant Difference (HSD) procedures were used as a follow-up for main effects to locate significant mean comparisons and $p < .05$ was set as the criterion for significant findings.

Findings for each dependent variable are presented in the following sequence: (a) practice conditions for task orientation items on the POSQ, (b) practice conditions for ego orientation questions on the POSQ, (c) task and ego responses in the competitive condition using the POSQ, (d) self-efficacy while practicing, (e) self-efficacy for competition, (f) intrinsic motivation during practice and competition, and (g) attributions while practicing and competing.

Dependent Variables of Interest

Practice Conditions for Task Orientation Items of the POSQ

Prior to treatment, analysis of mean scores indicated no differences between task treatment groups for their task responses on of the POSQ. Following baseline responses (trial blocks 1 and 2) the practice phase consisted of trial blocks 3, 4, and 5. Data were analyzed using a 6 x 5 (Groups

x Trial Blocks) factorial ANOVA with repeated measures on the last factor.

The analyses revealed a significant main effect for Groups, $F(5, 62) = 9.42, p < .05$. As expected, all task groups had significantly more task feelings when contrasted against the ego groups' responses. Further analyses on the task items of the POSQ indicated a significant Groups x Trial Block interaction, $F(5, 880) = 14.06, p < .05$. Figure 1 portrays mean differences between groups with their respective goal orientation and feedback across practice trial blocks.

Follow-up analyses revealed that responses for the ego failure group were significantly lower for task orientation when compared to all task conditions on the POSQ for trial block 3, ego failure ($M = 2.23, SD = .49$), task success ($M = 1.42, SD = 1.09$), task failure ($M = 1.42, SD = .46$), and task control ($M = 1.03, SD = .30$).

There were no significant differences found between the task treatment groups' responses on the POSQ across trial blocks. However, the task success group did maintain significantly greater task responses during practice trial block 4 ($M = 1.22, SD = 0.31$) when compared to all ego groups, ego success ($M = 2.08, SD = .52$), ego failure ($M = 2.20, SD = .62$), and ego control ($M = 2.19, SD = 1.12$). Although not always significant, all mean responses were greater for task oriented treatments than ego oriented ones.

Practice Conditions for Ego Orientation Questions on the POSQ

Mean responses for the ego items of the POSQ were calculated for all groups. Prior to treatment (trial block 2), no significant differences were found between the ego or task groups' on responses of the POSQ. As with the

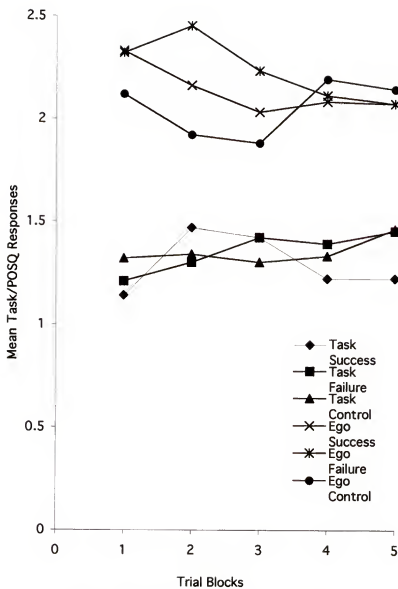


Figure 1. Mean responses from six groups on task orientation items of the POSQ during baseline and practice sessions.

task responses on the POSQ, trial blocks 1 and 2 served as baseline responses and 3, 4, and 5 practice conditions.

The ego items of the POSQ were analyzed using a 6 x 5 (Groups x Trial Blocks) factorial ANOVA with repeated measures on the last factor. Analyses resulted in a significant main effect for treatment Groups, $F(5, 880) = 10.25$, $p < .05$. As anticipated ego feelings were more prominent for the ego treatments than they were for task groups.

Additional testing resulted in a significant Groups x Trial Block interaction, $F(5, 880) = 15.53$, $p < .05$. Ego oriented treatment groups maintained greater ego responses than the task groups during the practice phase. Figure 2 depicts means between ego and task orientation groups when using success, failure, and no feedback across trial blocks.

Task failure treatment group experienced significantly less ego feelings (higher ego scores) when compared to all treatment groups except task control in trial block 4, task failure ($M = 3.19$, $SD = 1.04$), ego success ($M = 1.80$, $SD = .56$), ego failure ($M = 1.74$, $SD = .44$), and ego control ($M = 1.54$, $SD = .69$). Trial block 5 revealed significant mean differences between the task success responses on the POSQ ($M = 2.20$, $SD = 0.74$) and task failure treatment ($M = 3.16$, $SD = 1.20$). Overall, task oriented treatment groups had significantly higher ego scores on the POSQ (smaller means were indicative of greater tendencies towards a specific goal orientation).

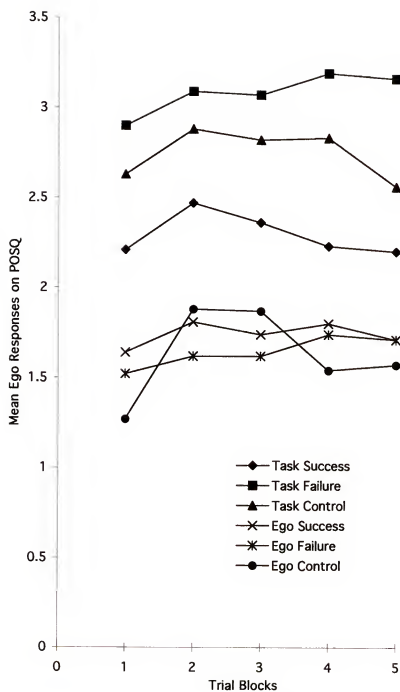


Figure 2. Mean responses for six groups on ego orientation items of the POSQ during baseline and practice conditions.

Task and Ego Responses in the Competitive Condition

The competitive phase of the investigation was analyzed by comparing baseline scores (trial block 1 and 2) to the competitive responses which were obtained during trial blocks 6 and 7 (competition). Data were analyzed using the POSQ, with a 6 X 2 X 4 (Groups X Feedback (win/lose) X Trial Blocks) factorial ANOVA with repeated measures on the last factor. A significant main effect for groups was shown $F(5, 56) = 10.89, p < .05$. The ego and task groups maintained significantly greater ego or task feelings for their respective treatment.

Analyses revealed a significant interaction for Groups x Feedback x Trial Blocks, $F(36, 880) = 8.83, p < .05$. The mean responses between treatment groups are displayed for task responses of the POSQ in Figure 3. Statistical analyses indicated for responses on the task items of the POSQ, the task success winners ($M = 1.28, SD = .40$) had significantly more task feelings than the ego failure losers ($M = 2.38, SD = .70$), and ego control losers ($M = 2.05, SD = 1.21$) groups following competition which was trial block 7. Also, on the ego responses of the POSQ during competition, the only significant findings were between the task success and task failure groups. The task failure losers ($M = 3.51, SD = 1.13$) ended with significantly less ego feelings than the task success winners ($M = 2.12, SD = .60$). See Figure 4 for mean responses found between treatment groups during competition on the ego items of the POSQ.

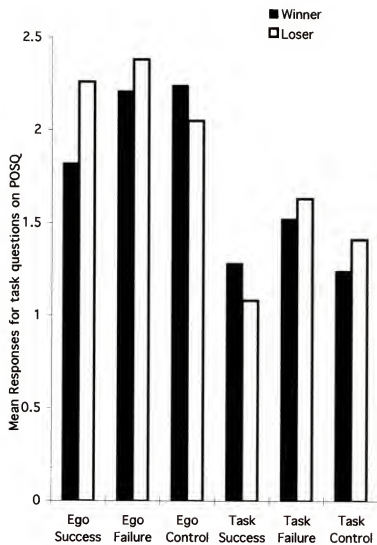


Figure 3. Task and ego mean scores for task orientation when winning and losing during competition (Trial block 7).

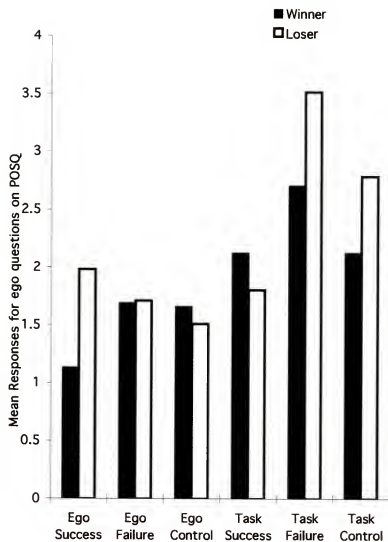


Figure 4. Task and ego mean scores for ego orientation when winning and losing during competition (Trial block 7).

Self-Efficacy During Practice

To determine how treatment groups having different goal orientations responded to self-efficacy questions, mean responses on a confidence scale ranging from no confidence (0%) to total confidence (100%) were obtained on a questionnaire. Prior to treatment, pretest responses were gathered to ensure that groups were equal. Statistical analyses revealed no differences between groups prior to treatment. Data were analyzed using a Groups x Trial Block (6 x 5) factorial ANOVA with repeated measures on the last factor. Significant differences were found for the main effect of Groups $F(5, 62) = 5.25, p < .05$. The task control group had more self-efficacy than other treatment groups.

Additional testing revealed a significant Groups x Trial Block interaction, $F(20, 384) = 6.05, p < .05$. Mean responses across trial blocks are presented in Table 1. There were no differences between the task success group's and ego success group's mean responses during practice. Task success mean responses in order of trial blocks were ($M = 75\%$, $SD = 10\%$), ($M = 74\%$, $SD = 17\%$), ($M = 78\%$, $SD = 18\%$) ($M = 75\%$, $SD = 16\%$) and ego responses were ($M = 80\%$, $SD = 12\%$), ($M = 86\%$, $SD = 06\%$), ($M = 81\%$, $SD = 09\%$) and ($M = 79\%$, $SD = 09\%$). When the task success group's responses were compared to all other treatment groups across trial blocks the only statistical significance found was between the ego failure group in trial block 4. The task success group's response was ($M = 78\%$, $SD = 16\%$) and ego failure was ($M = 58\%$, $SD = 17\%$). Also, the ego success treatment group had significantly more self-efficacy when compared with all task treatment groups and the ego

Table 1

Means and Standard Deviations on Self-Efficacy Responses (Percentage) for Task & Ego Oriented Treatment Groups in Practice.

Source	Pre Test	Practice Condition				
		TB1	TB2	TB3	TB4	TB5
Task Success	M: 78.0 SD: 10.9		75.0 10.8	74.0 17.6	78.0 18.8	75.0 16.0
Task Failure	M: 64.0 SD: 17.1		60.0 19.1	65.0 14.7	66.0 18.9	57.0 24.8
Task Control	M: 76.0 SD: 11.5		82.0 10.4	80.0 12.4	84.0 07.4	82.0 10.9
Ego Success	M: 78.0 SD: 12.7		80.0 12.0	86.0 06.7	81.0 09.2	79.0 09.0
Ego Failure	M: 64.0 SD: 22.2		61.0 20.4	58.0 22.8	58.0 17.8	66.0 18.9
Ego Control	M: 74.0 SD: 12.8		79.0 07.8	80.0 11.0	75.0 16.9	86.0 07.2

Note. Means in the same column with different subscripts differ significantly at $p < .05$ in Tukey (HSD) comparison.

failure group during practice with the exception of task failure group in trial block 4.

A comparison of mean responses for self-efficacy between task and ego failure treatment groups resulted in no significant differences. The trend between groups having greater self-efficacy across trial blocks were similar. The ego failure groups responses were slightly greater during trial blocks 2 and 5, and the task groups' responses were higher during the other practice conditions, trial blocks 3 and 4. Overall, the task and ego failure groups maintained lower self-efficacy when contrasted with all other treatments.

Analyses between control groups (ego and failure) revealed no statistically significant differences. Although not significantly different, the task control group had greater self-efficacy between trial blocks when compared to other task responses, and the ego failure treatment group. Higher mean efficacy responses were similar between the task control and task success treatment group (no significant differences).

Self-Efficacy During Competition

Data were analyzed to determine whether self-efficacy changed under competitive conditions and to identify possible changes in goal orientations following success or failure feedback during competition. Baseline responses (trial block 1) were compared to trial block 6, (competition) the self-efficacy responses following competition. To identify the differences between group responses following competition, data were computed using a Groups X

Feedback X Trial Block (6 X 2 X 2) factorial ANOVA with repeated measures on the last factor. Two significant main effects were observed as follows:

(a) Groups, $F(5, 56) = 10.89$, $p < .05$, and (b) Feedback, $F(1, 65) = 14.11$, $p < .05$. Winners had significantly more self-efficacy than losers.

During competition the ego treatment winners had greater self-efficacy than all task treatment winners with the exception of a slight difference between the task success winners ($M = 68\%$, $SD = 08\%$) and ego failure winners ($M = 65\%$, $SD = 27\%$). Also, the ego control winners ($M = 85\%$, $SD = 1\%$) had significantly more self-efficacy than task success losers ($M = 41\%$, $SD = 7\%$). See Figure 5 for self-efficacy mean responses for specific treatments when baseline responses are contrasted with competition. Similar responses were recognized between treatment groups for the losers. Ego treatment groups' mean responses were higher than all task responses. Although not a significant contribution towards these analyses, but of major importance for determining the influence of competition on self-efficacy was the fact that all treatment groups had lower mean responses during competition when compared to baseline responses and practice conditions.

Intrinsic Motivation During Practice and Competition

The Intrinsic Motivation Inventory (IMI) was given to participants with the purpose of determining whether intrinsic motivation changed with goal orientations following success and failure feedback. To adequately determine these possible changes, sub-categories of the inventory were analyzed in the

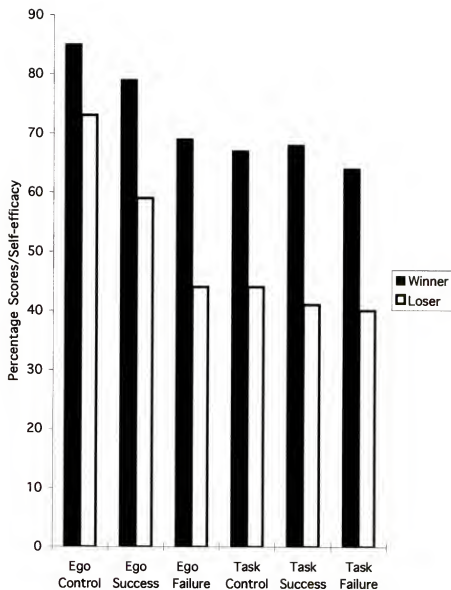


Figure 5. Mean totals for self-efficacy responses for task and ego groups when winning and losing in competition (Trial block 6).

following order: (a) Interest - enjoyment, (b) perceived competence, (c) effort-importance, and (d) tension-pressures.

Interest during practice. Practice data were analyzed with a 6 x 3 (Group x Trial Blocks) factorial ANOVA with repeated measures on the last factor. During the practice phase, analyses were conducted to determine how success or failure feedback influenced different treatment groups' interest-enjoyment. The success and control groups held more interest and enjoyment than the failure treatment groups. No significant interactions existed between Groups x Trial Blocks. Overall findings provided no significant differences between groups across trial blocks for interest during practice.

Interest during competition. All competitive data for this dependent variable were analyzed using a 6 X 2 X 2 (Groups X Feedback X Trial Blocks) factorial ANOVA with repeated measures on the last factor. Data were analyzed by comparing baseline responses (trial block 1) to trial block 4 (intrinsic motivation responses following competition). Statistical analyses resulted in a significant main effect for feedback, $F(1, 56) = 17.39, p < .05$. Winners reported more motivation and enjoyment than losers.

Further analyses revealed a Group X Feedback X Trial Block interaction $F(8, 56) = 3.03, p < .05$. Figure 6 illustrates the mean differences between treatment groups for competition. Significant mean differences were observed in trial block 4 (competition) between task success winners ($M = 5.6, SD = .78$) and ego failure losers ($M = 4.91, SD = 1.36$). The ego failure treatment group

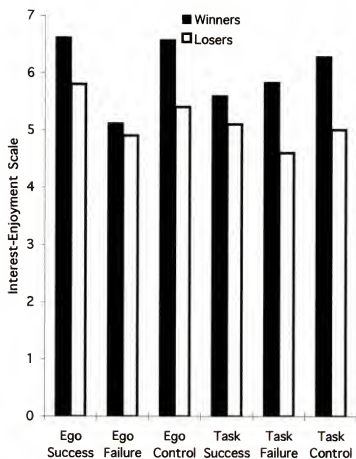


Figure 6. Intrinsic motivation during competition between treatment groups when winning and losing (Trial block 4).

reported lower intrinsic motivation when compared with all other treatments.

Perceived competency during practice. Analyses revealed a significant main effect for Groups, $F(5, 56) = 3.08$, $p < .05$, during practice. The control groups had greater self-efficacy. Further analyses resulted in a significant interaction between Groups x Trial Blocks, $F(5, 62) = 4.86$, $p < .05$.

Follow-up assessment provided significant mean differences between groups during trial blocks 1, 2, and 3. For example, task control responses ($M = 5.32$, $SD = 1.35$) in trial block 1 were significantly different from ego failure treatment ($M = 3.87$, $SD = 1.30$), which indicated that task treatments felt more competent. Analysis for trial block 2 revealed significant mean differences between the ego control treatment ($M = 5.4$, $SD = 1.16$) and ego success ($M = 5.3$, $SD = .85$) and task failure ($M = 3.43$, $SD = .82$) treatment groups. The ego success group ($M = 5.3$, $SD = .85$) reported significantly higher means than both the ego failure ($M = 3.9$, $SD = 1.01$) and task failure ($M = 3.43$, $SD = .82$) treatments. Also, the task failure treatment group had significantly lower competency when compared to the task control group ($M = 4.88$, $SD = 1.27$). In trial block 3, mean responses for the task failure group ($M = 4.1$, $SD = 1.0$) were significantly lower than the task control ($M = 4.9$, $SD = 1.33$), ego success ($M = 5.15$, $SD = 1.20$), and ego control ($M = 5.22$, $SD = 1.35$) treatment groups.

Perceived competency for competition. Analyses for competition revealed significant main effects as follows: (a) Group, $F(5, 65) = 3.19$, $p < .05$, and Feedback, $F(1, 56) = 8.86$, $p < .05$, as hypothesized, winners felt more

competent. Also, an interaction was observed between Groups x Feedback x Trial Blocks, $F(11, 56) = 2.53$, $p < .05$. Figure 7 depicts the mean differences between winners and losers during competition. The ego control winners ($M = 6.32$, $SD = 1.19$) felt significantly more competent when compared with the task failure losers ($M = 3.04$, $SD = 1.90$).

Effort-importance during practice and competition. Analyses for the effort questions on the intrinsic motivation inventory resulted in no differences between treatment groups during practice. Also, practice analyses revealed no significant differences between treatments. Although significance was not found, important findings relevant to this investigation were that winners in both ego and task treatment groups maintained higher responses on effort when compared with all losers.

Tension during practice and competition. Analyses during the practice and competitive conditions for the tension questions on the IMI failed to identify any significant differences. For this investigation, tension appeared to have no impact on goal orientations.

Attributions During Practice and Competition

The CDSII was used to determine the relationship between goal orientation and attributions. There are four sub-levels within this scale, for analyses each were addressed separately. The categories were presented as follows: (a) personal control, (b) stability, (c) locus of control, and (d) external control. Data were analyzed with a 6×3 (Groups x Trial Blocks) factorial

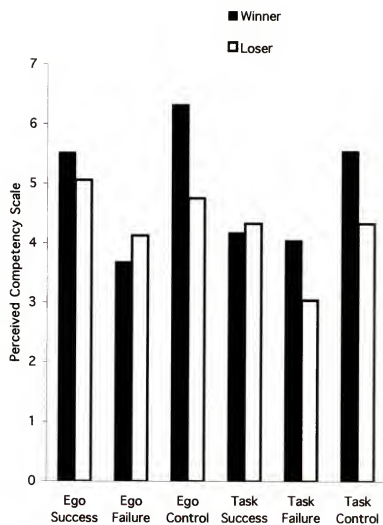


Figure 7. Intrinsic motivation during competition between treatment groups when winning and losing (Trial block 4).

ANOVA with repeated measures on the last factor. Analyses for competition were completed by conducting a $6 \times 2 \times 2$ (Groups x Feedback (win/lose) x Trial Blocks) factorial ANOVA with repeated measures on the last factor.

Overall findings for both practice and competitive conditions failed to reveal any significant interactions, main effects, or mean differences across trial blocks for different treatment groups. It appeared that there was no relationship between goal orientations and attributions in this investigation.

CHAPTER 5 DISCUSSION, SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR FUTURE RESEARCH

This investigation was primarily designed to test hypotheses related to the conceptual framework of goal orientation theory. Of particular interest was observing possible changes in goal orientation that may result through participation in different achievement settings (practice/competitive). To provide additional insight concerning the theoretical concept of goal orientation, the interactions between self-efficacy, intrinsic motivation, and attributions were observed. In an attempt to appropriately respond to the multiple hypotheses that were tested and avoid redundancy in reporting, a general overview of the hypotheses is presented as each dependent measure is identified. Practice and competitive data are discussed in the context of other research.

The sequence for this discussion is presented in the following manner:

- (a) an overview of expectations and outcomes for task questions on the POSQ,
- (b) an overview of expectations and outcomes for ego items on the POSQ,
- (c) goal orientation theory and research, (d) self-efficacy in practice and competition, (e) self-efficacy theory and research, (f) intrinsic motivation in competition and practice, (g) intrinsic motivation theory and research,
- (h) attributions in practice and competition, and (l) attributions theory and research.

Following the discussion section, a summary of this investigation is given and finally conclusions are drawn in an attempt to expand upon the

social-cognitive theory of achievement motivation as it relates to sport, exercise, and movement education. To conclude this chapter, general guidelines for future research and practical applications are presented.

Discussion

Task Orientation During Practice and Competition

In general, the hypothesis for responses on the task orientation items of the POSQ were that across trial blocks the task success treatment group would report more task characteristics than the other groups during practice and competition. These hypothesis were supported for practice and competition. The expectation that task failure and task control groups would be more task oriented during practice than all ego treatment groups was upheld. Also, during practice conditions it was anticipated that the task control treatment group would exhibit minimal change on their task responses because their treatment was not expected to influence behavior. Overall, there was minimal change for all task orientation groups during practice (see Figure 1 in Chapter 4).

During competition, it was hypothesized that task oriented winners would report higher task scores on the POSQ when compared with all losers. In actuality, the task success treatment group that lost during competition had greater task feelings than all other groups. These findings are consistent with goal orientation theory. A final hypothesis was the task success group winners in competition would report greater task characteristics than the task losers.

This expectation was not supported since the task success losers had greater ego feelings.

The aforementioned hypotheses were mostly supported. It was evident across trial blocks that the task success group had more task oriented feelings than all ego treatments and most task groups. During the initial practice phase following feedback, there were no differences between the task success and task failure treatments. The control group had greater task responses than all other groups immediately following the initial practice treatment. However, over time the task success group became more task oriented while the task failure group expressed fewer task feelings. The task control group's responses remained very stable across trial blocks until the final response, when they became less task oriented. Throughout this investigation, the task groups maintained greater task scores on the POSQ across trial blocks when weighted against the ego treatment groups. As expected, during competition all task oriented winners reported stronger task responses as compared with winners from all other groups. Another unexpected finding was the task success treatment group that lost during competition reported more task feelings than all other treatment groups, plus this group also had greater ego scores than other task treatment groups in competition.

A most critical finding was in regard to the stability of task responses. Across treatments from baseline, to practice conditions, and later competition there was minimal change in task orientation responses on the POSQ during

practice. However, during competition, the task success group that lost had significantly more ego feelings than the task failure losers. The hypotheses that task responses would change between treatment conditions was not upheld across trial blocks for practice, but was supported during competition. These findings contribute to the theoretical framework of goal orientation by refuting the concept of the stability of task orientation.

Ego Orientation During Practice and Competition

In regard to the ego items on the POSQ, specific hypotheses were developed. During practice the ego success treatment group was expected to have higher ego feelings (lower scores) on the ego items of the POSQ when contrasted with all other treatments. Albeit not significant, overall the ego failure group had greater ego feelings than all other groups. Individual goal dispositions, for perceived success or failure was not obtained for the ego failure group. Participants may have adopted a concept of extreme competency (I can do anything) or a total lack of ability (I can't do anything). Therefore, it was not possible to predict all of this group's responses in relation to other groups.

It was anticipated that the ego control treatment group would report lower scores (have higher ego characteristics) on the ego questions of the POSQ when compared with the other groups. Also, since this group received no treatment to bias its goal orientation, little change was expected in its responses across practice trial blocks. In actual findings, the ego control group maintained

more ego characteristics than the task groups. Also, no significant changes were observed for the ego control group during practice. However, as practice continued, this group became more ego oriented in its responses on the POSQ.

As hypothesized, for competition ego oriented winners reported higher ego scores than losers, with the exception of the control group. The task and ego group winners were expected to report higher ego feelings than task oriented losers. Findings were as hypothesized for all treatment groups except for the task success group. The task success group that won had less ego feelings than the task success losers. Due to the competition, all groups were expected to have higher ego scores than those revealed during practice. This hypothesis was supported for all groups, and is compatible with goal orientation theory.

Overall, the most significant finding was that task failure losers had significantly lower ego feelings than the task success winners. These findings are in contrast with the goal orientation literature, and supports the research hypothesis that goal orientation may shift in practice and competitive settings.

A majority of the aforementioned hypotheses were supported. For example, during all trial blocks, the ego oriented treatment groups maintained lower scores on the ego items of the POSQ when contrasted with the other groups. The ego control group showed a slight decrease in ego orientation following the initial treatment in practice, then returned to baseline with very little change for the remainder of practice.

Goal Orientation Theory and Research

The stability of task orientation as reported by Duda (1992), Nicholls (1992), and Roberts (1993) provides support for the nonsignificant findings observed during practice and competition over trial blocks. The selection process for participants in this study was uniquely different than other goal orientation studies reported in literature. It seems that by creating environments as in this investigation, participants had extremely high goal perspectives, and these beliefs were deeply embedded and fixed across trial blocks. The extreme goal perspective, 1/2 SD below the mean, seemed to make it difficult to shift responses to become more task oriented, because the margin for change was very small. This is probably why the task success group did not become even more task oriented during treatment.

In regard to the competitive setting and unexpected findings, research supports the notion that task oriented individuals persist longer and are more mastery involved than ego oriented individuals (Duda, 1992; Elliot & Dweck, 1988 & Nicholls 1984) . It seems logical by the definition of task orientation that if individuals were once successful (in practice setting) and they lost in competition, then they would adopt concepts that would assist them in becoming successful again (e.g., hard work, working to the best of their ability).

Of particular interest here is a basketball study that was created to measure the perception of motivational climate (Seifriz, Duda, & Chi, 1992).

Following basketball competition, questionnaires were administered to assess perceptions of the motivated climate. Findings revealed that players who perceived a mastery (task) climate believed that effort, hard work, and team effort were responsible for their success in sport. It is suggested that similar task oriented beliefs were responsible for the results obtained in the present investigation.

Most significant was the stability of ego orientation as observed across treatment conditions, and the significant difference between task groups on ego items of the POSQ during competition. Similar to task responses on the POSQ, ego responses resulted in no differences during practice (significant). Although the initial hypothesis in which changes were expected between practice and competitive settings were not supported for the ego treatment groups, this information may still contribute to goal orientation theory.

Nicholls (1992) recognized task orientation as a stable construct. This suggests that regardless of the situation (competition or practice), little or no changes in task goal perspectives would be observed. In theory, ego goal orientation is viewed as a less stable construct that changes based on a person's goal perspective in a given situation. Ideally, if a person is ego-involved and has questions regarding competency, a lower goal orientation pattern is expected (Duda, 1993). Therefore, according to this hypothesis, more variability was expected between ego success and ego failure groups when compared with the ego control. However, this hypotheses was not supported in

the present study. Instead, similar to the task responses on the POSQ, the ego groups revealed no difference between trial blocks. Therefore, the concept that ego orientation is unstable was not supported. In extreme conditions, ego goal perspectives seem just as stable as task orientation during practice and more stable in competition. Also, according to these findings, it appears that task oriented responses are not always stable, and are influenced by competition. Additional research is needed to determine how success and failure influence goal orientations.

Self-Efficacy in Practice and Competition

To compare the interaction between goal orientation and self-efficacy, certain hypotheses were generated for practice and competitive settings. It was hypothesized that task treatment groups would have greater self-efficacy than the other groups with the exception of the ego success group where no differences were expected. According to previous research that addressed the stability of task orientation, even in failure situations, little change should be observed in the task groups. Therefore, the task failure treatment group was expected to yield greater self-efficacy during practice than the ego failure treatment (Martin & Gill, 1991, McAuley & Jacobson, 1991). Similar to the hypothesis for the task success treatment group, the ego success group should have felt no threat to its ability, and it was presumed it would have higher self-efficacy scores than the other groups, with the exception of the task success group. It was hypothesized that the ego treatment group receiving failure

feedback during practice would have less self-efficacy than the other groups. The ego success treatment group was expected to have greater self-efficacy than both failure treatment groups. Since the control group did not receive treatment, no differences were expected in their self-efficacy responses across trial blocks. However, when all groups were placed into a competitive environment, it was hypothesized that both the task and ego treatment groups winners would have greater self-efficacy than losers.

As predicted, no differences were observed between task and ego success treatment groups across trial blocks during the practice session. The hypothesis suggesting that success groups would have greater self-efficacy during practice was only partially supported. When success treatment groups, were contrasted with the failure success groups they (success groups) reported higher self-efficacy. However, the task control group had more self-efficacy than the task success group across all practice trial blocks. The expectation that the task failure group would have more self-efficacy than the ego failure treatment was partially supported across trial blocks. During competition as hypothesized, winners in all treatments reported more self-efficacy than losers.

Self-Efficacy Theory and Research

The attempt to integrate motivational concepts and determine a possible interaction between goal orientation and subsequent behaviors (self-efficacy) is in a preliminary stage. Dishman (1988) emphasized the importance of developing a sound theoretical focus to clearly understand self-efficacy beliefs.

Since self-efficacy theory has strong implications for understanding and predicting behavior, McAuley (1992) suggested that it may be understood better if studied in conjunction with other factors that influence behaviors, such as goal orientations.

In the present study, all discrepancies in expectations occurred during practice. According to McAuley (1992), caution must be made to ensure that self-efficacy is actually being measured. Initially performance is expected to be influenced by self-efficacy, but afterwards, further change may be based on information or social-cognitive changes adopted due to previous experience. Dishman (1988) cautions that when assessing self-efficacy appropriate questions must be generated, to ensure that responses are not limited to performance criterion. Instead, inquiry should address performance outcomes as well as self-perceptions concerning cognitive aspects of performance. Caution must be taken to ensure that both the physical and cognitive perceptions are being addressed. Having a complete performance based outcome questionnaire may not adequately measure self-efficacy because responses may be based solely on skill level or performance. Also, testing procedures may influence self-efficacy. According to Feltz (1992), self-efficacy should be measured prior to competition because performance seems to influence efficacy. Because research in this area is in its early stages, some of the methodological issues raised may have influenced this investigation.

Intrinsic Motivation in Practice and Competition

The IMI was administered to examine the relationship between goal orientations and intrinsic motivation. Following respective treatments across trial blocks, this questionnaire was given in practice and competitive settings. The hypothesis generated to examine intrinsic motivation was that the success treatment groups would report higher intrinsic motivation during practice as compared with other groups (Vallerand, 1983; Vallerand & Reid 1984; Weinberg & Ragan, 1979). No differences were anticipated between success treatment groups. Both task and ego control treatment groups were expected to report more intrinsic motivation than the task failure (task and ego) groups. Similar findings were hypothesized for the task control treatment group, and it was believed it would have more intrinsic motivation than both the task and ego failure treatment groups. The ego failure group was expected to report less intrinsic motivation than the other groups. In the competitive setting, winners in both the task and ego groups were expected to report greater intrinsic motivation than all losers.

The IMI was subdivided into four components, and to obtain maximum information, each item was analyzed separately. Overall, support for the hypotheses was partially obtained. There appeared to be an interaction between goal orientation and interest and perceived competency items on the IMI. However, when the tension and effort items were analyzed, no significance

was observed. Therefore, the following information is based on the conditions where differences were identified.

During practice, no differences were observed between goal orientations and interest, tension, or effort. However, when perceived competency was analyzed, the hypotheses for the success treatment groups were supported. For example, mean responses revealed that across trial blocks the success treatment groups' scores indicated they felt more competent during practice when contrasted with both of the failure groups. Also during practice, the control groups had higher scores on the competency items of the IMI than failure treatment groups. During the practice conditions, the hypothesis that winners would be more intrinsically motivated was partially supported. For example, in the interest-enjoyment component of the IMI, the winners in all treatment groups reported having more interest and enjoyment than all losers. However, when perceived competency was observed, the winners across all treatment groups reported feeling more competent than losers except for the ego failure treatment group and the task success group.

Intrinsic Motivation Research and Theory

According to the contemporary social-cognitive theories of achievement motivation, it is suggested that goal orientations should influence intrinsic motivation. More specifically, task motivated perspectives should foster intrinsic motivation (Duda, 1992). According to Nicholls (1989), achievement goals are used as a means to an end for ego orientation, which is more indicative of

extrinsic factors. He further suggested that task involvement was considered as an end within itself which would lead one to believe that intrinsic motivation was a guiding factor. According to the theory of achievement motivation, ego involvement should lead to a decrease in intrinsic motivation (Duda, 1992). Therefore, it seems logical that the task groups in this investigation should have had greater intrinsic motivation across trial blocks when compared with the ego treatment groups. However, these expectations were only slightly supported. It appears that the individual feedback given to treatment groups influenced their intrinsic motivation more than their specific goal orientations.

Another interesting observation by Duda (1992), Deci & Ryan (1985), and Ryan (1982) is there is a significant decline in intrinsic motivation whenever a competitive component is added. In the present investigation, this seemed to be applicable for the task treatment groups but not for the ego groups. It appears that task orientation fosters intrinsic motivation and ego orientation leads to more external motivation. Based on the findings of this study, additional research is needed to determine the influence of goal perspective on intrinsic motivation.

Attributions in Practice and Competition

Similar to the other dependent measures, the CDSII was administered to participants to determine attributions. The responses were used to identify the influence of goal orientations on attributions. No overall differences were expected between the task and ego success groups. In both conditions, these

groups were expected to have more functional attributions when compared with the other treatment groups during practice. During practice, it was presumed that the task failure and task control groups would have more functional attributions when contrasted with the ego failure treatment group. A possible key to predicting performance, as it relates to the ego failure group, is knowing individual goal dispositions (how the situation is interpreted). It was anticipated that the ego failure group would have more dysfunctional attributions than all other groups. The ego control group was expected to have less functional attributions when contrasted with the success treatment groups, and more functional attributions than the failure treatment groups.

Similar to the IMI, the CDSII is an assessment scale that is used to determine attributions. The scale measures four different dimensions of attributions (McAuley, Duncan, & Russell, 1992). To determine the relationship between goal orientations and attributions, comparisons were made using each dimension separately. The analyses revealed no significant findings in practice or competitive settings. Therefore, there was no interaction between goal orientations and attributions when using the CDSII.

Attribution Research and Theory

Ames and Ames (1981) found support for a relationship between attributions and goal orientations. For example, in an academic setting, it was revealed that ego orientation treatment groups used more dysfunctional attributions such as linking performance to ability, and task orientation groups

adopted more functional attributions, such as effort, to explain performance. In a similar study, Duda and Nicholls (1989) administered the TEOSQ and attribution assessment questions in a sport setting. The results were similar to those found in the academic setting. An interaction was established between the two motivational constructs in both the academic and sport setting. In regard to the current investigation and the previously mentioned research, there are many methodological differences. There was no treatment or manipulation of groups in the earlier studies. Therefore, it seems that the underlying rationale and differences in approaches are so extreme (treatment versus no treatment) that caution should be taken when making comparisons.

One reason for the nonsignificant interaction between attributions and goal orientation may have been based on performance feelings versus outcome. Spink and Roberts (1980) found that racquetball players with clear won-losses versus ambiguous won-losses interpreted their performance differently. The clear outcome groups had higher internal (functional) attributions than the ambiguous groups. In this investigation, to mask performance during practice, the process explained to participants for success and failure left them with a sense of uncertainty. This feedback may have encouraged them to focus on performance instead of outcome. However, only outcome scores were considered as part of the treatment.

In another applied setting, Duda and Chi (1989) created a task and ego environment using one-on-one basketball. Afterwards, questions were asked of

participants as to their attributions about performance as they related to being a function of how hard they tried, their personal skill, their opponent's skill, and lucky breaks. The findings supported that task individuals have more functional attributions than ego oriented losers. It seems the methods used to measure attributions and the questions generated in the Duda and Chi study may have been more appropriate than the approach taken in the present investigation.

Summary

This investigation was designed to test the theoretical constructs of goal orientation theory by determining the stability of task and ego goal orientation in practice and competitive settings. In an attempt to understand the theory of achievement motivation, the interaction between goal orientations and intrinsic motivation, self-efficacy, and attributions were observed.

Sixty-eight male participants were assigned to one of six treatment groups based on responses to demographic questions and the POSQ. Extreme task and ego scores were used for placement. For example, to be considered for participation, individuals had to have scores 1/2 SD below the mean in one orientation and at the mean or higher for the other goal orientation. For participation, task oriented individuals qualified at a much greater ratio (more than 25:1) than ego oriented subjects.

Task and ego oriented treatment groups received either failure feedback, success feedback, or no feedback (control) during the practice conditions in two separate meetings. Administered were a dribble and shot obstacle course task

and a shoot and rebound task. Following treatment, the POSQ, Intrinsic Motivation Inventory (IMI), a self-efficacy scale, and CDSII questionnaires were administered to determine different motivational responses. The third session was designed for competition, and involved a modified one-on-one basketball game between participants. Modified versions of the aforementioned questionnaires were completed afterwards.

Data for each dependent variable were analyzed using simple ANOVAs and follow-up analyses were computed with Tukeys HSD. Analyses revealed a significant difference between goal orientations during treatment. Task and ego treatment groups maintained higher POSQ responses within their specific goal orientation when compared with other treatment groups. Scores for task and ego responses on the POSQ remained stable for treatment groups during practice, but there was a significant difference between task treatment groups' responses on the POSQ during competition. This finding suggests that task orientation may not be as stable as presented posited in goal orientation literature.

Analyses resulted in a positive interaction between practice success feedback and self-efficacy and intrinsic motivation. A critical finding was that self-efficacy responses were lower during competition for all treatment groups. Also, a positive interaction was observed between goal orientations and intrinsic motivation. For example, during competition, winners in both task and ego treatment groups reported more interest on the IMI when compared with

losers. Similar findings were reported during practice and competition for perceived competency on the IMI. The success treatment groups felt more competent than the failure groups during practice, and in competition winners felt more competent than losers.

General hypotheses as to a positive interaction between functional attributions and success treatment were not supported in either the practice or competitive conditions. Analyses of treatment groups and attributions resulted in no significant findings.

Overall, conclusions suggest that goal orientations for task or ego remain stable during practice, but task responses shift during competition. These results do not support all of the hypotheses proposed in this investigation. However, a significant finding refutes a portion of goal orientation theory.

Many of the characteristics associated with the different goal perspectives were evident. For example, participants assigned to task treatments in many instances seemed more interested in performing well for their own sake and doing better than they had in subsequent trial blocks. It was also easier to convince them to accept their treatment (success or failure) than it was for the ego treatment groups.

Conclusions

Based on the data analyses, the following conclusions seem appropriate:

1. When task and ego are extremely high in a particular goal

orientation, responses to goal orientation questions remain stable in practice settings.

2. High task or high ego oriented individuals have more task or ego characteristics respectively according to their responses in practice and competitive settings.

3. During competition, ego oriented winners have greater task feelings than ego oriented losers.

4. During competition, individuals with high ego characteristics who win become more ego oriented than those in the other treatment groups who win or lose.

5. In competitive settings, task oriented individuals who are unsuccessful have fewer ego feelings than those in the same treatment group who are successful.

6. When self-efficacy is observed in practice and competitive settings, beliefs are greatly reduced in the competitive setting regardless of successful or unsuccessful results.

7. Individuals who receive no treatment (control) maintain greater self-efficacy than those who are given failure feedback.

8. When task and ego oriented individuals are compared during competition, the ego groups have more self-efficacy.

9. During competition, when winners and losers are compared, winners maintain more interest-enjoyment (intrinsic motivation) than losers.

10. According to responses on the CDSII during practice and competition, goal orientations have no influence on attributions.

Implications For Future Research

The following recommendations are proposed for future research.

1. In an attempt to develop a broad concept of motivation it is necessary to establish a continuous line of research to determine the influence that goal orientation has when compared with other self-perceptions related to motivation.

To provide more in-depth information concerning the theory of goal orientation, it is necessary to continue investigating its influence on other self-perceptions of motivation. Additional research is needed that compares goal orientation to self-efficacy, intrinsic motivation, attributions, perceived effort, persistence, task choice, and performance (Gill, 1993). Gill stresses the importance of developing a multifaceted theory of motivation. This goal may be accomplished by observing individual differences which includes self-perceptions in the aforementioned areas. There is a need to analyze how personal goals, individual differences, and perceptions influence motivation in practice and competitive settings. Ideally, research may reveal that it is necessary to offer experiences to individuals who are intrinsically motivated, task oriented, and effort driven, more cooperative opportunities that nurture their desires. Whereas, a person who has more ego characteristics, is externally motivated, and is ability driven, may benefit more from competitive and

performance based interventions. Since winning does not always result in perceived success, it is necessary to obtain more personal information concerning how individuals are motivated.

2. It is important to understand goal orientation theory and other motivational concepts and apply their constructs in practical settings.

In competitive environments self-efficacy and intrinsic motivation have been shown to decrease. Also, participants become more ego oriented during competition (Nicholls, 1992). In a majority of goal perspective research it is suggested that task motivated climates are more appropriate for learning. Because of these findings and other similar results it is necessary to ensure that appropriate information is provided to teachers, coaches, and others who are responsible for providing services for students and athletes. It is necessary that leaders are cognizant of the importance of creating appropriate environments and are aware of how different manipulated settings influence self-perceptions and performance (Roberts, 1992). Procedures for developing appropriate intervention protocols should be conveyed to parents and teachers to ensure that they are adept in motivation training and are able to restructure motivational climates to ensure that individual learners are able to adopt motivational concepts that will lead to positive feelings and ongoing participation (Roberts, 1993).

3. Further testing of the theoretical constructs of goal orientation as presented in the current investigation is needed.

In the present investigation it was observed that task orientation shifts in competitive settings. According to goal orientation theory, these findings refute the literature that suggests that task orientation is a stable construct. This information may provide a different perspective concerning goal orientation theory. However, additional research is needed to test the reliability of these findings. More experimental investigations like the current research is needed to determine whether goal orientations can be situationally manipulated, and if there are actual shifts in goal orientation in different achievement settings (Duda, 1992).

4. Sport motivation researchers need to validate achievement motivation and goal orientation research across different populations.

Recent research has been conducted to validate the TEOSQ and determine if goal perspective theory is applicable across different cultures (Kim & Gill, 1997; Li, Harmer, Chi & Vongjaturapat, 1996). There is a great need to continue investigating how cultures facilitate the development of goal orientation across different cultures. A majority of achievement motivation research has targeted school age Caucasian males in class settings. Currently, validation is needed that addresses various gender issues and observe different ethnic groups. These observations should be conducted in academic, leisure, club, and recreational settings.

REFERENCES

Ames, C. (1984). Conceptions of motivation within competitive and non-competitive goal structures. In R. Schwarzer (Ed.), Self-related cognitions in anxiety and motivation (pp. 229-245). Hillsdale, NJ: Erlbaum.

Ames, C. (1987). The enhancement of student motivation. In D. Kleiber & M. Maehr (Eds.), Advances in motivation and achievement (pp. 123-148). Greenwich, CT: JAI Press.

Ames, C. (1992). Achievement goals, motivational climate, and motivational processes. In G. C. Roberts (Ed.), Motivation in sport and exercise (pp. 161-176). Champaign, IL: Human Kinetics.

Ames, C., & Ames, R. (1981). Competitive versus individualistic goal structures: The salience of past performance information for casual attributions and affect. Journal of Educational Psychology, 73, 411-418.

Ames, C., & Ames, R. (1984). Systems of student and teacher motivation: Toward a qualitative definition. Journal of Educational Psychology, 77, 536-556.

Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation process. Journal of Educational Psychology, 80, 260-276.

Atkinson, J. W. (1957). Motivational determinants of risk taking behavior. Psychological Review, 64, 359-372.

Atkinson, J. W. (1958). Toward experimental analysis of human motivation in terms of motives, expectancies, and incentives. In J. W. Atkinson (Ed.), Motives in fantasy, action, and society (pp. 288-305). Princeton: Van Nostrand.

Atkinson, J. W., & Raynor, J. O. (1978). Personality, motivation, and achievement. New York: Hemisphere Publishing.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.

Bandura, A. (1986). Social foundations of thought and action. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1989). Regulation of cognitive processes through perceived self-efficacy. Developmental Psychology, 25 (2), 729-735.

Bandura, A., & Adams, N. E. (1977). Analysis of self-efficacy theory of behavioral change. Cognitive Therapy and Research, 1, 287-310.

Boyd, M., & Callaghan, J. (1994). Task and ego goal perspectives in organized youth sport. International Journal of Sport Psychology, 22, 411-424.

Burton, D. (1989). Winning isn't everything: Examining the impact of performance goals on collegiate swimmer's cognition and performance. The Sport Psychologist, 3, 34-47.

Burton, D. (1992). The Jekyll/Hyde nature of goals: Reconceptualizing goal setting in sport. In T. S. Horn (Ed.), Advances in sport psychology (pp. 167-297). Champaign, IL: Human Kinetics.

Butt, D. S. (1976). Psychology of Sport: The behavior, motivation, personality, and performance of athletes. New York: Van Nostrand Reinhold.

Chi, L. (1993). Predictions of achievement-related cognitions and behaviors in the physical domain: A test of the theories of goal perspective and self-efficacy. Unpublished dissertation, Purdue University.

Cohen, J. (1977). Statistical power analysis for the behavioral sciences. New York: Academic Press.

Deci, E. L. (1975). Intrinsic motivation. New York: Plenum Press.

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum Press.

Dishman, R. K. (1988). Exercise adherence: Its impact on public health. Champaign, IL: Human Kinetics.

Duda, J. L. (1981). A cross-cultural analysis of achievement motivation in sport and the classroom. Unpublished doctoral dissertation, University of Illinois, Urbana.

Duda, J. L. (1987). Toward a developmental theory of children's motivation in sport. Journal of Sport and Exercise Psychology, 9, 130-145.

Duda, J. L. (1988). The relationship between goal perspectives and persistence and intensity among recreational sport participants, Leisure Sciences, 10, 95-106.

Duda, J. L. (1989). Goal perspectives, participation and persistence in sport. International Journal of Sport Psychology, 20, 42-56.

Duda, J. L. (1992). Motivation in sport settings: A goal perspective approach. In G. Roberts (Ed.), Motivation in sport and exercise (pp. 57-91). Champaign, IL: Human Kinetics.

Duda, J. L. (1993). Goals: A social-cognitive approach to the study of achievement motivation in sport. In R. L. Singer, M. Murphey, & L. K. Tennant (Eds.), Handbook of research on sport psychology (pp. 421-436). New York: Macmillan.

Duda, J. L., & Chi, L. (1989). The effects of task and ego involving conditions on perceived competence and causal attributions in basketball. Paper presented at the Association for the Advancement of Applied Sport Psychology, University of Washington, Seattle, WA.

Duda, J. L., Chi, L., Newton, M. L., Walling, M. D., & Catley, D. (1995). Task and ego orientation and intrinsic motivation in sport. International Journal of Sport Psychology, 26, 40 - 63.

Duda, J. L., & Nicholls, J. (1989). Task and Ego Orientations in Sport Questionnaire: Psychometric properties. Unpublished manuscript.

Duda, J. L., & Nicholls, J. (1992). Dimensions of achievement motivation in schoolwork and sport. Journal of Educational Psychology, 84, 1-10.

Duda, J. L., Olson, L. K., & Templin, T. (1991). The relationship of task and ego orientation to sportsmanship attitudes and the perceived legitimacy of aggressive acts. Research Quarterly for Exercise and Sport, 62, 79-87.

Duda, J. L., Smart, A., & Tappe, M. (1989). Personal investment in the rehabilitation of athletic injuries. Journal of Sport and Exercise Psychology, 11, 367-381.

Duda, J. L., & Tappe, M. (1989). Predictions of personal investment in physical activity among middle-aged and older adults. Perceptual and motor Skills, 66, 543-549.

Duda, J. L., & White, S. A. (1992). Goal orientations and beliefs about the cause of sport success among elite skiers. The Sport Psychologist, 6, 334 - 343.

Dweck, C. S. (1986). Motivational processes affecting learning. American Psychologist, 41, 1040-1048.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. Psychological Review, 95, 256-273.

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. Journal of Personality and Social Psychology, 54, 5-12.

Feltz, D. L. (1988). Gender differences in the causal elements of self-efficacy on high avoidance motor task. Journal of Sport Psychology, 10, 151-166.

Feltz, D. L. (1992). Understanding motivation in sport: A self-efficacy perspective. In G. C. Roberts (Ed.), Motivation in sport and exercise (pp. 93-106). Champaign, IL: Human Kinetics.

Feltz, D. L., Landers, D. M., & Raeder, U. (1979). Enhancing self-efficacy in high avoidance motor tasks: A comparison of modeling techniques. Journal of Sport Psychology, 1, 112-122.

Feltz, D. L., & Riessinger, C. A. (1990). Effects of in vivo emotive imagery and performance feedback on self-efficacy and muscular endurance. Journal of Sport and Exercise Psychology, 12, 132-143.

Garcia, A. W., & King, A. C. (1991). Predicting long term adherence to aerobic exercise: A comparison of two models. Journal of Sport & Exercise Psychology, 13 (4), 394-410.

Gauvin, L. (1990). An experiential perspective on the motivational features of exercise and lifestyle. Canadian Journal of Sport Sciences, 15, 51-58.

Gill, D. L. (1986). Psychological dynamics of sport. Champaign, IL: Human Kinetics.

Gill, D. L. (1993). Competitiveness and competitive orientation in sport. In R. N. Singer, M. Murphy, & L. K. Tennant (Eds.), Handbook of research on sport psychology (pp. 314-327). New York: Macmillan.

Gill, D. L., & Deeter, T. E. (1988). Development of the Sport Orientation Questionnaire. Research Quarterly for Exercise and Sport, 59, 191-202.

Goudas, M., Biddle, S., Fox, K., & Underwood, M. (1995). It ain't what you do, it's the way that you do it: Teaching style affects children's motivation in track and field lessons. The Sport Psychologist, 9, 254-264.

Hall, H. K. (1989). A social-cognitive approach to goal setting: The mediating effects of achievement goals and perceived ability. Unpublished dissertation, University of Illinois at Urbana-Champaign.

Hamilton, J. O. (1974). Motivation and risk taking behavior: A test of Atkinson's Theory. Journal of Personality and Social Psychology, 29, 856-864.

Heckhausen, H., Schmalt, H., & Schneider, K. (1984). Achievement motivation in perspective. New York: Academic Press.

Hull, C. L. (1943). Principles of behavior. New York: Appleton-Century-Crofts.

Jones, J. G. (1990). A cognitive perspective on the processes underlying the relationship between stress and performance in sport. In J. G. Jones & L. Hardy (Eds.), Stress and performance in sport (pp. 17-42). New York: John Wiley & Sons.

Jourden, F. J., Bandura, A., & Banfield, J. T. (1991). The impact of conceptions of ability on self-regulatory factors and motor skill acquisition. Journal of Sport & Exercise Psychology, 13, 213-226.

Kim, B. J. & Gill, D. L. (1997). A Cross-cultural extension of goal perspective theory to Korean youth sport. Journal of Sport & Exercise Psychology, 19, 142-155.

Kimiecik, J. C., Allison, M. T., & Duda, J. L. (1986). Performance satisfaction, perceived competence and game outcome: The competitive experience of Boys' Club youth. International Journal of Sport Psychology, 17, 255-268.

Kleiber, D. A., & Roberts, G. C. (1981). The effects of sport experience in the development of social character: An exploratory investigation. Journal of Sport Psychology, 3, 114-122.

Landers, D. M. (1983). Whatever happened to theory testing in sport psychology? Journal of Sport Psychology, 5, 135-151.

Leeper, M., & Greene, D. (1975). Turning play into work: Effects of adult surveillance and intrinsic rewards on children's intrinsic motivation. Journal of Personality and Social Psychology, 31, 479-486.

Li, F., Harmer, P., Chi, L., & Vongjaturapat, N. (1996). Cross-cultural validation of the task and ego orientation in sport questionnaire. Journal of Sport & Exercise Psychology, 18, 392-407.

Lloyd, J., & Fox, K. (1992). Achievement goals and motivation to exercise in adolescent girls: A preliminary study. British Journal of Physical Education Research Supplement, 11, 12-16.

Lochbaum, M. R., & Roberts, G. C. (1993). Goal orientations and perceptions of the sport experience. Journal of Sport & Exercise Psychology, 15, 160-171.

Maehr, M. L. (1984). Meaning and motivation: Toward a theory of personal investment. In R. Ames & C. Ames (Eds.), Research on motivation in education: Vol. 1. Student motivation (pp. 115-144). New York: Academic Press.

Maehr, M. L., & Braskamp, L. A. (1986). The motivation factor: A theory of personal investment. Lexington, MA: Lexington Books.

Maehr, M. L., & Nicholls, J. G. (1980). Culture and achievement motivation: A second look. In N. Warren (Ed.), Studies in cross-cultural psychology (pp. 221-267). New York: Academic Press.

Marsh, H. (1994). Sport motivation orientations: Beware of jingle-jangle fallacies. Journal of Sport and Exercise Psychology, 16, 365-380.

Martens, R. (1974). Arousal and motor performance. In J. Wilmore (Ed.), Exercise and sport science review (pp. 155-188). New York: Wiley.

Martens, R. (1975). Social psychology and physical activity. New York: Harper & Row.

Martens, R. (1977). Sport competition anxiety test. Champaign, IL: Human Kinetics.

Martens, R. (1984). Arousal and motor performance. In J. Wilmore (Ed.), Exercise and sport science review (pp. 155-188). New York: Wiley.

Martens, R., & Landers, D. M. (1970). Motor performance under stress: A test of the inverted-U hypothesis. Journal of Personality and Social Psychology, 16, 29-37.

Martin, J. J., & Gill, D. L. (1991). The relationship among competitive orientation, sport-confidence, self-efficacy, anxiety, and performance. Journal of Sport & Exercise Psychology, 13 (2), 149-159.

McAuley, E. (1985). Modeling and self-efficacy: A test of Bandura's model. Journal of Sport Psychology, 7, 283-295.

McAuley, E. (1992). The role of efficacy cognitions in the prediction of exercise behavior in middle-aged adults. Journal of Behavioral Medicine, 15(1), 65-88.

McAuley, E., Duncan, T. E., & Russell, D. W. (1992). Measuring Casual attributions: The revised causal dimension scale (CDSII). The Society for Personality and Social Psychology, 18, 566-573.

McAuley, E., Duncan, E. T., & Tammen, V. V. (1989). Psychometric properties of the Intrinsic Motivation Inventory in a competitive sport setting: A confirmatory factor analysis. Research Quarterly for Exercise and Sport, 60, 48-58.

McAuley, E., & Jacobson, L. B. (1991). Self-efficacy and exercise participation in sedentary adult female exercise patterns. American Journal of Health Promotion, 5, 185 - 191.

McAuley, E., & Tammen, V. (1989). The effects of subjective and objective competitive outcomes on intrinsic motivation. Journal of Sport & Exercise Psychology, 11, 84-93.

McClelland, D. C. (1951). Personality. New York: Wm. Sloane.

Newton, M. L., & Duda, J. L. (1993). Elite adolescent athletes' achievement goal and beliefs concerning success in tennis. Journal of Sport and Exercise Psychology, 15, 437-448.

Nicholls, J. G. (1984a). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. Psychological Review, 91, 328-346.

Nicholls, J. G. (1984b). Conceptions of ability and achievement motivation. In R. Ames & C. Ames (Eds.), Research on motivation in education: Student motivation, Vol. I. (pp. 39-73). New York: Academic Press.

Nicholls, J. G. (1989). The competitive ethos and democratic education. Cambridge, MA: Harvard University Press.

Nicholls, J. G. (1992). The general and the specific in the development and expression of achievement motivation. In G. Roberts (Ed.), Motivation in sport and exercise (pp. 31-56). Champaign, IL: Human Kinetics.

Ommundsen, Y., & Vaglum, P. (1992). Sport-specific influences: Impact on persistence in soccer among adolescent antisocial soccer players. Journal of Adolescent Research, 7, 507-521.

Roberts, G. C. (1974). Effects of achievement motivation and social environment on risk-taking. Research Quarterly, 45, 42-55.

Roberts, G. C. (1982). Achievement motivation in sport. In R. Terjung (Ed.), Exercise and sport science reviews (Vol. 10) (pp. 237 - 269). Philadelphia, PA: Franklin Institute Press.

Roberts, G. C. (1984). Achievement motivation in children's sport. In J. Nicholls (Ed.), The development of achievement motivation (pp. 251-281). Greenwich, CT: JAI Press.

Roberts, G. C. (1992). Motivation in sport and exercise: Conceptual constraints and convergence. In G. C. Roberts (Ed.), Motivation in sport and exercise (pp. 3-29). Champaign, IL: Human Kinetics.

Roberts, G. C. (1993). Motivation in sport: Understanding and enhancing the motivation and achievement of children. In R. N. Singer, M. Murphey, & L. K. Tennant (Eds.), Handbook of research on sport psychology (pp. 405-420). New York: Macmillan.

Roberts, G. C. (1996). Achievement goals in sport: The development and validation of the Perception of Success Questionnaire. Unpublished Manuscript.

Roberts G. C., & Balague, G. (1989). The development of a social-cognitive scale of motivation. Paper presented at the Seventh World Congress in Sport Psychology, Singapore.

Roberts, G. C., & Duda, J. (1984). Motivation in sport: The mediating role of perceived ability. Journal of Sport Psychology, 6, 312-324.

Roberts, G. C., Kleiber, D. A., & Duda, J. L. (1981). An analysis of motivation in children's sport: The role of perceived competence in participation. Journal of Sport Psychology, 3, 206-216.

Roberts, G. C., & Pascuzzi, D. (1979). Casual attributions in sport: Some theoretical implications. Journal of Sport Psychology, 1, 203-211.

Roberts, G. C., & Treasure, D. C. (1995). Achievement goals, motivational climate and achievement strategies and behaviors in sport. International Journal of Sport Psychology, 26, 64-80.

Ryan, R. M. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. Journal of Personality and Social Psychology, 43, 450-461.

Schneider, K. (1984). The cognitive basis of task choice in preschool children. Advances in Motivation and Achievement, 3, 57-72.

Seyle, H. (1956). The stress of life. New York: McGraw-Hill.

Siefriz, J. J., Duda, J. L., & Chi, L. (1992). The relationship of perceived motivational climate to intrinsic motivation and beliefs about success in basketball. Journal of Sport and Exercise Psychology, 14, 375-391.

Singer, R. N. (1984). Sustaining motivation in sport. Tallahassee, FL: Sport Consultants International.

Solomon, M. A., & Boone, J. (1993). The impact of student's goal orientation in physical education classes. Research Quarterly for Exercise and Sport, 64, 418-424.

Spink, K. S., & Roberts, G. (1980). Ambiguity of outcome and causal attributions. Journal of Sport Psychology, 2 (3), 237-244.

Thorkildsen, T. A. (1989). Justice in the classroom: The student's view. Child Development, 60, 323-334.

Treasure, D. C., & Roberts, G. C (1994). Cognitive and affective concomitants of task and ego goal orientations during the middle school years. Journal of Sport & Exercise Psychology, 16, 15-28.

Vallerand, R. J. (1983). The effects of differential amounts of positive verbal feedback on intrinsic motivation of male hockey players. Journal of Sport Psychology, 5, 100-107.

Vallerand, R. J., Deci, E. L., & Ryan, R. M. (1987). Intrinsic motivation in sport. Exercise and Sport Sciences Review, 15, 389-425.

Vallerand, R. J., & Reid, G. (1984). On the casual effects of perceived competence on intrinsic motivation: A test of cognitive evaluation theory. Journal of Sport Psychology, 6, 94-102.

Vealey, R. S. (1986). The conceptualization of sport confidence and competitive orientation: Preliminary investigation and instrument development. Journal of Sport Psychology, 8, 221-246.

Weinberg, R., & Ragan, J. (1979). Effects of competition, success/failure, and sex on intrinsic motivation. Research Quarterly, 50, 503-510.

Weiner, B. (1974). An attributional interpretation of expectancy-value theory. In B. Weiner (Ed.), Cognitive views of human motivation (pp. 33-57). New York: Academic Press.

Weiner, B. (1979). A theory of motivation for some classroom experiences. Journal of Educational Psychology, 71, 3-25.

Weiner, B. (1980). Human motivation. New York: Holt, Rinehart & Winston.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. Psychological Review, 92, 548-573.

Weiner, B. (1986). An attributional theory of motivation and emotion. New York: Springer-Verlag.

Williams, L. (1994). Goal Orientations and athletes' preferences for competence information sources. Journal of Sport & Exercise Psychology, 16, 416-430.

Wrath, S. C., & Biddle, J. H. (1989). Goal-setting in children's sport: An exploratory analysis of goal participation, ability and effort instructions, and post-event cognition. International Journal of Sport Psychology, 20, 79-72.

Wurtele, S. K. (1986). Self-efficacy theory in contemporary psychology. Journal of Social & Clinical Psychology, 4 (3), 290-301.

Yerkes, R. M., & Dodson, J. D. (1908). The relationship of strength of stimulus to rapidity of habit formation. Journal of Comparative and Neurological Psychology, 18, 459-482.

APPENDIX A
DEMOGRAPHIC DATA FORM

Date: _____

Your name: _____ Last four digits of SS #: _____

Class Meeting Days: M T W TR F (circle all that apply)

Course name: _____ Time of class: _____

Instructor: _____ Your telephone number: _____

What is the best time to contact you: _____

Age: _____ Height: _____ Dominant Hand: _____

Basketball History:

1. Have you ever played basketball? Yes _____ No _____
2. Have you ever played on a high school, university, or club basketball team?
Yes _____ No _____
If you answered yes, explain _____.
3. Do you currently play basketball? Yes _____ No _____
If so, how often? _____
4. On a ten point scale, how would you rank yourself as a basketball player?
Extremely Low 1 2 3 4 5 6 7 8 9 10 Extremely High
5. Do you consider yourself a recreational basketball player?
Yes _____ No _____

APPENDIX B
PERCEPTION OF SUCCESS QUESTIONNAIRE

Code # _____ Date _____ Group _____

Meeting # _____ Age _____

Rank your passion for basketball.

No passion

**Ultimate
passion**

1 2 3 4 5 6 7 8 9 10

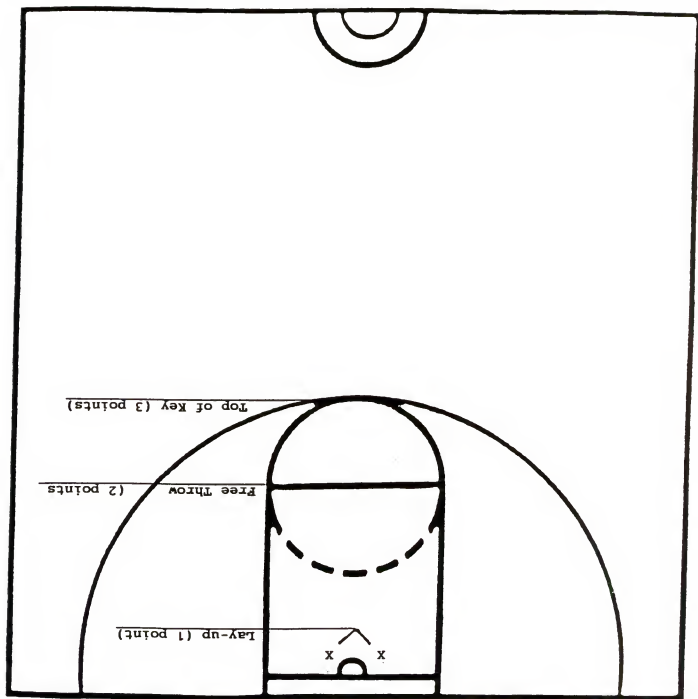
This is a questionnaire which asks you to express your perception of what success in sport means to you. There are no right or wrong answers. I ask that you circle the letter that best reflects how you feel about that question.

When playing sport, I feel most successful when:

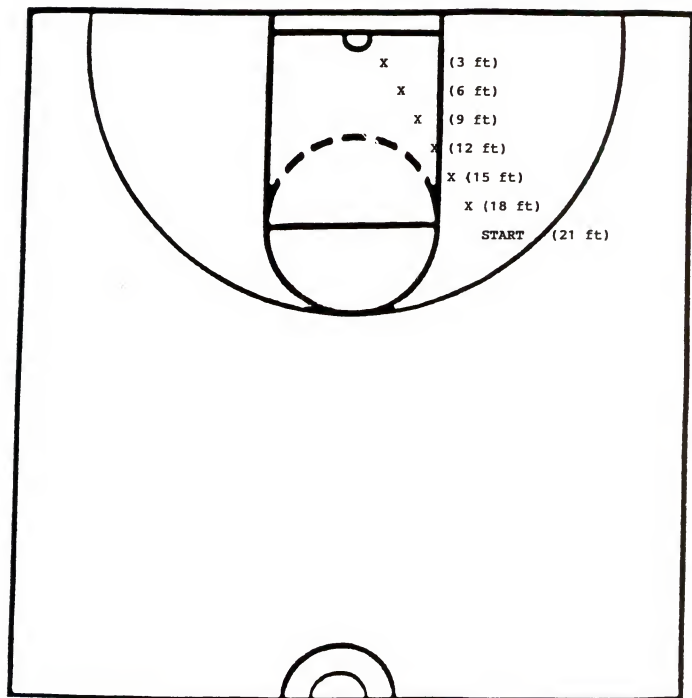
		Strongly Agree		Neutral		Strongly Disagree
1.	I beat other people	1	2	3	4	5
2.	I am clearly superior	1	2	3	4	5
3.	I am the best	1	2	3	4	5
4.	I work hard	1	2	3	4	5
5.	I show clear personal improvement	1	2	3	4	5
6.	I out perform my opponents	1	2	3	4	5
7.	I reach a goal	1	2	3	4	5
8.	I overcome difficulties	1	2	3	4	5

		Strongly Agree		Neutral		Strongly Disagree
9.	I reach personal goals	1	2	3	4	5
10.	I win	1	2	3	4	5
11.	I show other people I am the best	1	2	3	4	5
12.	I perform to the best of my ability	1	2	3	4	5

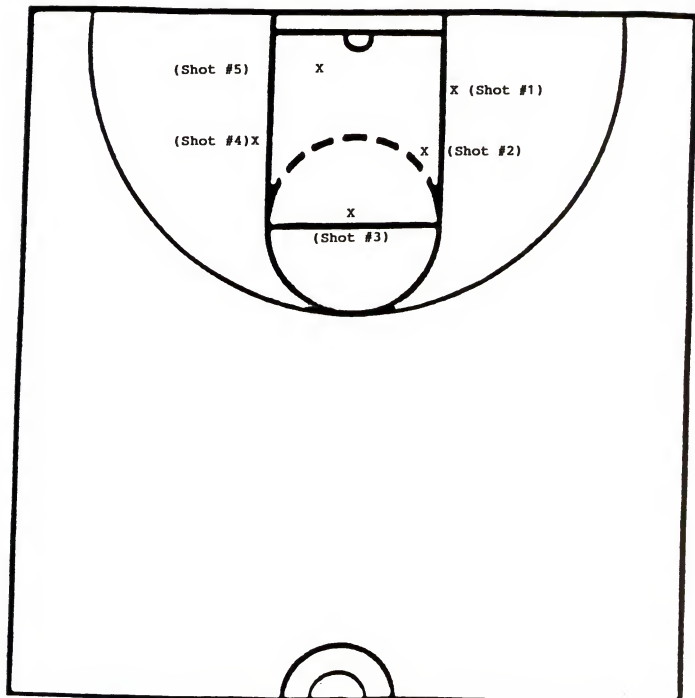
APPENDIX C SCREENING TASK DIAGRAM



APPENDIX D
DRIBBLE AND SHOOT OBSTACLE TASK DIAGRAM



APPENDIX E
SHOOT AND REBOUND TASK DIAGRAM



APPENDIX F
SHOOT AND REBOUND SCRIPT
(Success/Failure Treatment Groups)

The purpose of this drill is to examine your speed and shooting precision in basketball. This task is called the shoot and rebound task. Norms have been created using 18,000 male recreational basketball players between the age of 19 to 24. They were developed by several coaches throughout the state of North Carolina.

When performing this task, I will ask you to begin shooting from the number 1 spot of 5 pre-determined locations (indicate specific placement of cones). Stand within the circumference of the cone when making each shot attempt. After you shoot the ball from the initially assigned spot, quickly rebound the basketball. If a goal is made on the first attempt, precede to the next assigned spot (number 2) and continue the pattern until you have shot from each position. If a goal is not made on the first shot, you will get two more chances. As soon as the last attempt (3rd) or a goal is made move to the next numbered spot in the sequence. A trial block will consist of one complete rotation through the five positions. Which means that you may take as few as five shots during a trial block or as many as fifteen. Following each trial block, there will be a 2-min rest. During the break, you may continue working on the task, take a drink, or have a seat. However, I am not allowed to talk to you

during that time. There will be three trial blocks of this task and, after the last one, feedback will be given based upon the established norms. If your score is above the 50th percentile success feedback will be given and if you're below that number your performance is considered unsuccessful. Following feedback a series of questionnaires will be administered.

Do you have any questions? To make sure you understand this task, please demonstrate the procedures using the first two cones. Afterwards, I will begin the stop watch for the trial block as soon as you release the ball for the first attempted goal. Remember that feedback will be based on time and the number of shots attempted and your score will be give as a percentile.

Good Luck!

APPENDIX G

DRIBBLE AND SHOOT OBSTACLE TASK SCRIPT

(Success/Failure Treatment Groups)

This drill is called the dribble and shoot obstacle task (DSOT). The purpose of this task is to examine your basketball handling skills, agility, speed, and shooting ability. Your scores will be compared to norms that were developed by coaches throughout the state of North Carolina. They were established using approximately 15,000 male recreational basketball players between the age of 19-24.

When performing this task the object is to complete as many trials as possible within a 1 1/2 min time period. There will be 3 separate trial blocks of this task. A 2-min rest between each trial block will be provided and, you may continue working on the task, have a drink, or just sit during the rest periods. Unfortunately, I cannot talk to you during the break.

The task requires going as fast as conceivable while taking as few shots as possible. I will ask you to begin dribbling the ball at a starting mark 3 ft away from the first cone (point to first cone). Dribble the ball, using only one hand, around the cones in a preset weaving course of travel. You are not allowed to straddle the cones and the basketball should be included in the weaving pattern (you may not keep the ball on one side when approaching the goal). If you go off course from this set position return to the point of the infraction and

correct the error, while the clock continues to run. Also, if a cone is knocked down during a trial re-position it in its original place and continue the weaving pattern from that location. Once the last cone has been cleared, attempt a basket, using a one hand shot, (the location marked 3 ft from the basket). If a basket is not made on the first try, retrieve the ball and continue shooting one-hand shots from the shooting location until a basket is made. After making a basket, dribble the ball straight back to the starting position and repeat the above procedures until time is called.

Once 3 trials of the task have been completed, your score will be compared to the norms by using the number of cycles completed and the number of baskets attempted, then feedback will be given. Afterwards, there will be a series of questionnaires.

Do you have any questions? If not, I would like for you to walk through the prescribed pattern and shoot the ball once to demonstrate understanding, afterwards, begin the task. I will start the stop watch whenever you begin dribbling the ball.

APPENDIX H
SHOOT AND REBOUND SCRIPT
(Control Groups)

The purpose of this drill is to examine your speed and shooting precision in basketball. This task is called the shoot and rebound drill. It consist of skills that must be developed in order to become a good basketball player. It is important that you put your body in proper position prior to each shot attempt. Follow through on each shot and retrieve the ball as rapidly as possible.

I will ask you to begin shooting from number 1 of 5 pre-determined spots (indicate specific locations of cones). Stand in front of the cone when making each shot attempt. After shooting the ball from the initial assigned spot, quickly run in and rebound the basketball. If a goal is made on the first attempt, precede to the next sequentially assigned location (number 2) and continue this pattern until you have shot from each position. If a goal is not made on the first try, there will be two more chances to make the basket. As soon as the last attempt (3rd) or a goal is made, move to the next numbered spot in the sequence. A trial block will consist of one complete rotation through the five positions. You will be asked to complete a total of three trial blocks, following each, there will be a 2-min rest. During the break, you may continue to work on the task, take a drink, or have a seat. I cannot to talk with you during the break.

After the last trial block, feedback will be given regarding your performance, followed by a series of questionnaires.

Are there any questions? To make sure you understand, please demonstrate the procedures explained using the first two cones. Afterwards, I will begin the stop watch for the trial block as soon as you release the ball for the first attempted goal. Remember that performance will be based on time and the number of shots attempted.

Good Luck!

APPENDIX I
DRIBBLE AND SHOOT OBSTACLE TASK SCRIPT
(Control Groups)

Basketball is a popular sport in recreational and professional competition in the US. There are a number of skills required to play a game. Some of these skills include agility, speed, dribbling, and shooting. These are the components that make-up the dribble and shoot obstacle task (DSOT) that will be performed.

When doing this task, try to complete as many cycles as possible within a 1 1/2-min time period. You will be asked to complete 3 separate trials blocks of this task. A 2-min rest between each trial block will be provided and you may continue working on the task, have a drink, or just sit during this time.

Unfortunately, I cannot talk to you during the break.

The task requires going as fast as possible and taking as few shots as necessary. Begin by dribbling the basketball at a starting mark 3 ft away from the first cone (point to first cone), using only one hand, dribble the ball around the cones in a preset weaving pattern of travel. If you go off course, return to the point of the infraction and correct the error, while the clock continues to run. Also, if a cone is knocked down during a trial, re-position it in its original place and continue dribbling from that location. Once the last cone has been cleared, attempt a basket, using a one-hand shot, (the location is marked 3 ft from the basket). If a goal is not made on the first attempt, retrieve the ball and continue shooting one hand shots from the same shooting location until a basket is

made. After making the basket, dribble the ball straight, back to the starting position and repeat the above procedures until time is called.

Once 3 trials blocks have been completed, I will ask you a few questions regarding your performances and give you feedback relating to the average number of shots you attempted and how many successful goals you made. Afterwards, there will be a series of questionnaires.

Are there any questions? If not, please walk through the prescribed pattern and shoot the ball once to demonstrate your understanding.

APPENDIX J
SELF-EFFICACY DRIBBLE AND SHOOT OBSTACLE

Code _____ Date _____ Group _____

Meeting _____ Age _____

This questionnaire asks you to express your perception of how confident you are/were in your performance. There are no right or wrong answers. Circle the percentage that best indicates your certainty. If you are 100% sure that you actually performed the task circle 100%, if you did not do the skill at all circle 0%.

No confidence
in performance
0%

Complete confidence
in performance
100%

1. Dribbling the ball when I return to the starting line.

0% 15% 30% 45% 60% 75% 90% 100%

2. Keeping the ball close to my body.

0% 15% 30% 45% 60% 75% 90% 100%

3. Keeping the ball low when I dribble.

0% 15% 30% 45% 60% 75% 90% 100%

4. Making sure I properly weave in and out of cones.

0% 15% 30% 45% 60% 75% 90% 100%

5. Keeping all body parts clear of cones.

0% 15% 30% 45% 60% 75% 90% 100%

6. Controlling the ball.

0% 15% 30% 45% 60% 75% 90% 100%

No confidence
in performance
0%

Complete confidence
in performance
100%

7. Getting all attempted shots on the first attempt.

0% 15% 30% 45% 60% 75% 90% 100%

8. Getting all attempted shots by the second attempt.

0% 15% 30% 45% 60% 75% 90% 100%

9. Going as fast as possible.

0% 15% 30% 45% 60% 75% 90% 100%

10. Performing better than others.

0% 15% 30% 45% 60% 75% 90% 100%

APPENDIX K
SELF-EFFICACY SHOOT AND REBOUND TASK

Code _____ Date _____ Group _____

Meeting _____ Age _____

This questionnaire asks for your perception of how confident you are/were in your performance. There are no right or wrong answers. Circle the percentage that best indicates your certainty. If you are 100% sure that you performed the task circle 100%, if you did not do the task at all circle 0%.

No confidence
in performance
0%

Complete confidence
in performance
100%

1. Controlling the ball during the entire task.

0% 15% 30% 45% 60% 75% 90% 100%

2. Following through on each attempted shot.

0% 15% 30% 45% 60% 75% 90% 100%

3. Quickly rebounding each shot.

0% 15% 30% 45% 60% 75% 90% 100%

4. Putting self (body) in proper position before shooting the ball.

0% 15% 30% 45% 60% 75% 90% 100%

5. Going as fast as possible.

0% 15% 30% 45% 60% 75% 90% 100%

6. Making shots closest to the basket by the third attempt.

0% 15% 30% 45% 60% 75% 90% 100%

No confidence
in performance
0%

Complete confidence
in performance
100%

7. Making shots closest to the basket on the first attempt.
- 0% 15% 30% 45% 60% 75% 90% 100%
8. Making shots furthest away from the basket by the third attempt.
- 0% 15% 30% 45% 60% 75% 90% 100%
9. Making shots furthest away from the basket on the first attempt.
- 0% 15% 30% 45% 60% 75% 90% 100%
10. Performing better than others on this task.
- 0% 15% 30% 45% 60% 75% 90% 100%

APPENDIX L
SELF-EFFICACY ONE-ON-ONE COMPETITION

Code _____ Date _____ Group _____

Meeting _____ Age _____

This questionnaire asks for your perception of how confident you are/were in your performance. There are no right or wrong answers. Circle the percentage that best indicates your certainty. If you are 100% sure that you performed the task circle 100%, if you did not do the task at all circle 0%.

No confidence
in performance
0%

Complete confidence
in performance
100%

1. Protecting the ball with my body while playing.

0% 15% 30% 45% 60% 75% 90% 100%

2. Keeping the ball low and away from my opponent.

0% 15% 30% 45% 60% 75% 90% 100%

3. Blocking my opponents shots.

0% 15% 30% 45% 60% 75% 90% 100%

4. Blocking opponent out for the defensive rebound.

0% 15% 30% 45% 60% 75% 90% 100%

5. Keeping opponent out of shooting range.

0% 15% 30% 45% 60% 75% 90% 100%

6. Using better strategies than your opponent

0% 15% 30% 45% 60% 75% 90% 100%

No confidence
in performance
0%

Complete confidence
in performance
100%

7. Making all attempted lay-ups.

0% 15% 30% 45% 60% 75% 90% 100%

8. Making all attempted long shots.

0% 15% 30% 45% 60% 75% 90% 100%

9. Making each attempted shot.

0% 15% 30% 45% 60% 75% 90% 100%

10. Beating my opponent.

0% 15% 30% 45% 60% 75% 90% 100%

APPENDIX M
INTRINSIC MOTIVATION INVENTORY
SRT AND DSOT

Code _____ Date _____ Group _____

Meeting _____ Age _____

Using the scale below, please indicate to what extent you agree with each of the following items corresponding to your reasons for practicing basketball.

	Strongly Disagree						Strongly Agree	
1. I enjoy basketball very much	1	2	3	4	5	6	7	
2. I think that I am pretty good at this basketball task	1	2	3	4	5	6	7	
3. I put a lot of effort into basketball drills	1	2	3	4	5	6	7	
4. It was important for me to do well on this basketball task	1	2	3	4	5	6	7	
5. I felt tense while doing the basketball task	1	2	3	4	5	6	7	
6. I tried very hard when while doing the basketball task	1	2	3	4	5	6	7	
7. Doing the basketball task was fun	1	2	3	4	5	6	7	

		Strongly Disagree						Strongly Agree
8.	I would describe this basketball task as interesting	1	2	3	4	5	6	7
9.	I felt pressured while doing the basketball task	1	2	3	4	5	6	7
10.	I was anxious while doing the basketball task	1	2	3	4	5	6	7
11.	I didn't try very hard at doing the task	1	2	3	4	5	6	7
12.	After doing the task for a while, I felt pretty competent	1	2	3	4	5	6	7
13.	I was very relaxed while performing the basketball task	1	2	3	4	5	6	7
14.	I am pretty skilled at this task	1	2	3	4	5	6	7
15.	This task did not hold my attention	1	2	3	4	5	6	7
16.	I couldn't do this task very well	1	2	3	4	5	6	7

APPENDIX N
INTRINSIC MOTIVATION INVENTORY
One-On-One Competition

Code _____ Date _____ Group _____

Meeting _____ Age _____

Using the scale below, please indicate to what extent you agree with each of the following items corresponding to your reasons for practicing basketball.

	Strongly Disagree						Strongly Agree
1. I enjoy basketball very much	1	2	3	4	5	6	7
2. I think that I am pretty good at basketball	1	2	3	4	5	6	7
3. I put a lot of effort into basketball games	1	2	3	4	5	6	7
4. It was important for me to do well at this game	1	2	3	4	5	6	7
5. I felt tense while playing the basketball game	1	2	3	4	5	6	7
6. I tried very hard when while playing the basketball game	1	2	3	4	5	6	7
7. Playing the basketball game was fun	1	2	3	4	5	6	7

	Strongly Disagree						Strongly Agree		
8. I would describe the game of basketball as interesting	1	2	3	4	5	6	7		
9. I felt pressured while playing the basketball game	1	2	3	4	5	6	7		
10. I was anxious while playing the basketball game	1	2	3	4	5	6	7		
11. I didn't try very hard at playing the basketball game	1	2	3	4	5	6	7		
12. After playing the game for a while, I felt pretty competent	1	2	3	4	5	6	7		
13. I was very relaxed while playing the basketball game	1	2	3	4	5	6	7		
14. I am pretty skilled at basketball	1	2	3	4	5	6	7		
15. This game did not hold my attention	1	2	3	4	5	6	7		
16. I couldn't play this game very well	1	2	3	4	5	6	7		

APPENDIX O
THE CAUSAL DIMENSION SCALE II

Code # _____ Date _____ Group _____

Meeting # _____ Age _____

Please fill out this short questionnaire regarding your performance.

Decide what you believe is the one major reason that caused you to fail/succeed on the task.

Write the reason in the blank provided and then relate the reason to the scales that appear on the questionnaire by circling one number per scale (do not circle the words). Do you understand the instructions for the questionnaire? If not, please ask now and I will clarify them.

What is the primary reason that caused you to _____ in the task?

Think about the reason you have written above. The items below concern your impression or opinions about the cause of your performance. Circle one number for each of the following questions.

Is the cause something:

- | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|-------------------------------------|
| 1. That reflects an aspect of yourself | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Reflects an aspect of the situation |
| 2. Manageable by you | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not manageable by you |

3. Permanent	9	8	7	6	5	4	3	2	1	Temporary
4. You can regulate	9	8	7	6	5	4	3	2	1	You cannot regulate
5. Over which others have control	9	8	7	6	5	4	3	2	1	Over which others have no control
6. Inside of you	9	8	7	6	5	4	3	2	1	Outside of you
7. Stable over time	9	8	7	6	5	4	3	2	1	Variable over time
8. Under the power of other people	9	8	7	6	5	4	3	2	1	Not under the power of other people
9. Something about you	9	8	7	6	5	4	3	2	1	Something about others
10. Over which you have power	9	8	7	6	5	4	3	2	1	Over which you have no power
11. Unchangeable	9	8	7	6	5	4	3	2	1	Changeable
12. Other people can regulate	9	8	7	6	5	4	3	2	1	Other people cannot regulate

APPENDIX P
INSTITUTIONAL REVIEW BOARD APPROVAL



UNIVERSITY OF
FLORIDA

Institutional Review Board

114 Psychology Bldg.
PO Box 112250
Gainesville, FL 32611-2250
Phone: (352) 392-0433
Fax: (352) 392-0433

January 28, 1997

TO: Ms. Sarah Price
119 FLG

FROM: C. Michael Levy, Chair,
University of Florida Institutional
Review Board

SUBJECT: Approval of Project # 97.075
The effects of success/failure feedback on task and ego orientations
of recreational basketball players in practice & competitive settings
Funding: Unfunded

I am pleased to advise you that the University of Florida Institutional Review Board has recommended the approval of this project. The Board concluded that participants will not be placed at more than minimal risk in this research. Given your protocol it is essential that you obtain signed documentation of informed consent from each participant. Enclosed is the dated, IRB-approved informed consent to be used when recruiting participants for this research.

If you wish to make any changes in this protocol, you must disclose your plans before you implement them so that the Board can assess their impact on your project. In addition, you must report to the Board any unexpected complications arising from the project which affect your participants.

If you have not completed this project by January 28, 1998, please telephone our office (392-0433) and we will tell you how to obtain a renewal.

It is important that you keep your Department Chair informed about the status of this research.

CML/h2

cc: Vice President for Research
Dr. Keith Tennant

APPENDIX Q PROCEDURES

Classroom Visit

1. Brief overview
2. Complete demographic form
3. Complete POSQ

Meeting -Week One

1. Brief overview
2. Complete informed consent form
3. Warm-up
4. Screening Task
5. Rest period
6. Administer questionnaires (POSQ, SE, IMI, CDSII)
7. SRT or DSOT give trial block 1
8. Rest
9. Give trial block 2
10. Rest
11. Give trial block 3
12. Provide feedback
13. Administer questionnaire (SE)
14. SRT or DSOT give trial block 1
15. Rest
16. Give trial block 2
17. Rest
18. Give trial block 3
19. Provide norm referenced feedback
20. Administer questionnaires (POSQ, IMI, SE, CDSII)
21. Schedule next meeting

Meeting - Week Two

1. Brief overview
2. Give POSQ
3. SRT or DSOT give trial block 1
4. Rest
5. Give trial block 2
6. Rest
7. Give trial block 3

8. Provide feedback
9. Administer questionnaires (SE)
10. SRT or DSOT give trial block 1
11. Rest
12. Give trial block 2
13. Rest
14. Give trial block 3
15. Provide feedback
16. Administer questionnaires (POSQ, IMI, SE, CDSII)
17. Schedule next meeting

Meeting - Week Three

1. Brief overview
2. Administer POSQ
3. Begin one-on-one competition/game
4. Provide performance feedback
5. Rest (if over 8 min)
6. Continue one-on-one competition/game
7. Provide performance feedback
8. Rest
9. Administer questionnaires (POSQ, IMI, SE, CDSII)
10. Obtain address to mail debriefing letter

APPENDIX R
INFORMED CONSENT FORM

**University of Florida
Department of Exercise and Sport Sciences
Motor Behavior**

Project Title: Shifts in Motivational Goal Orientations Under Simulated Practice and Competitive Conditions.

Principle Investigator: Sarah Price, Motor Behavior, 119 FLG, 392-0580.

Co Investigator: Keith Tennant, Ph.D., Project Supervisor, Motor Behavior, 100 FLG, 392-0584.

This form is to certify that I, _____, hereby agrees to participate as a volunteer in this scientific investigation as part of an authorized research project at the University of Florida, under the direction of Sarah Price and supervision of Keith Tennant, Ph.D.

Purpose and Testing Procedures

The purpose of this study is to assess the basketball skill levels of undergraduate college males. You will be given verbal instructions concerning the tasks to be performed. During this investigation you are evaluated on tasks such as: (a) Shooting and rebounding, (b) dribbling and shooting and (c) competing in one-on-one basketball. After completing a task you will be given feedback related to your performance, then you will be asked to complete a series of questionnaires. You are asked to come to the basketball courts on three separate occasions at times that are convenient for you. The first two visits are designed as practice settings and the last visit is competitive. The overall time commitment is approximately 2.5 hours. At the end of this investigation a letter will be mailed to you, providing you with additional information regarding this research.

General Information

- (a) I understand that the principle investigator will answer any of my questions concerning this research project and my rights as a volunteer participant.
- (b) I understand that there is minimal risk to my health and well being.
- (c) I understand that I will receive no monetary compensation for my participation in this study.
- (d) I understand that I am free to withdraw my consent and terminate my participation at any time and doing so will not affect my class grade.

- (e) I understand that my data and responses to any questions will remain confidential. My identity will be withheld from all data being used, and a numeric coding system will be used.

I have read and understand the procedures described above. I voluntarily agree to participate in this study and certify that I have received a copy of this agreement.

Signature of Participant

Date

I have defined and fully explained this study to the above named participant.

Signature of Principal Investigator

Date

**Approved by the
University of Florida
Institutional Review Board
(IRB 02) for use through**

JAN 28 1998

APPENDIX S

SCRIPT INTRODUCTION AND SCREENING TASK

Thank you for coming to participate in this research project. Before we begin with the first task, I would like to take a minute to explain what can be expect during each visit. Also, it is imperative that you do not discuss anything about this research with other participants. Your opinion may bias other's responses, and interfere with the experiment. At the end of this study, I will inform you further about this research and questions may be asked.

Today, you will complete a series of three different tasks. The first skill is a screening task and the second and third are different basketball drills. Following the last two tasks, there will be a series of questionnaires. Each task will be explained in detail prior to your attempt. On the second visit, there will be a repeat of tasks two and three. The second visit will last approximately 45 min. The last visit will involve a one-on-one competition (game for control groups) between you and an opponent who has similar shooting abilities (this is the purpose of the screening task). The visit will take about 30 min. Appointments will be made following each visit for the next meeting.

Before we go any further, take a few minutes to warm-up by shooting some baskets. The first drill involves some long and short shots so, try a few during practice.

Screening Task

The purpose of this screening task is to evaluate your shooting ability. This information will be used to place you with a person of compatible shooting ability for the one-on-one competition (game). The objective of the screening task is to make as many points as possible from three different shooting locations on the basketball court. The first shot will be attempted from the top of the key (worth three points). The next shot attempt will be made from the free throw line (worth two points), and the third shot should be a lay-up from either side of the goal (worth one point). Once you begin this task, continue shooting from the three different positions for a total of 6 trials or 18 shots. Remember that this is not a timed task therefore, take the necessary time to set-up for each shot. Again, make as many points as possible.

Do you have any questions? If not, let's get started.

APPENDIX T
SUCCESS FEEDBACK
(days one and two)

Shoot & Rebound Task

____ Name _____, give me a second to calculate the average scores and look at the norms. When I evaluated your performance, the norms revealed a score at the _____ percentile. This score is above the 50th percentile therefore, you succeeded at this task. Your performance was better than _____ % of the people who have participated in this task. Remember that there will be another opportunity to get an even better score during the next visit. Take a 2-min break, afterwards, I will have you complete a series of questionnaires.

Dribble & Shoot Obstacle Task

You've just finished the DSOT. I need to take a second to look at the scores. You completed a total of _____ cycles, and took _____ shots in the 4 1/2 min time span. According to norms the average person only completes _____ cycles. This performance places you in the _____ percentile range, which means that your score is above the average male recreational basketball player, so you succeeded at this task. There will be one more chance to obtain a higher score during the next meeting. Take a short break and then there will be a few questionnaires for you to complete. Thanks!

APPENDIX U
FAILURE FEEDBACK
(day one and two)

Shoot & Rebound Task

____ Name _____, give me a second to calculate the scores and look at the norms. When I evaluated your performance the score was _____ %. This score is below the 50th percentile range which indicates that you failed at this task. The norms revealed that more than 50% of the people who participated in this task performed better than you. Remember there will be another opportunity to perform this task during the next visit. It's time to take a short break. Afterwards, I will have you complete a series of questionnaires.

Dribble & Shoot Obstacle Task

That was the end of the DSOT. I need to take a moment to look up the scores. You completed a total of _____ cycles, and took _____ shots in the 4 1/2 min time span. According to norms the average person can complete _____ cycles. This performance places you in the _____ percentile range. Therefore, this score is below the average male recreational basketball player indicating that you failed at this task. There will be another chance to obtain a better score during your next meeting. Take a short break and then there will be a few questionnaires to complete. Thanks.

APPENDIX V
CONTROL FEEDBACK
(day one and two)

Shoot & Rebound Task

____Name____, give me a second to average your scores. I calculated that it took an average of ____ min and ____ shots to complete a cycle. Was this task was difficult? Initially, I constructed the task only around the free throw area but, it was too hard for most participants. Did you slow down to have more accurate shots? Usually, the more a person concentrates on his shots, the longer it takes to complete a trial block. Take a 2-min break and then, I will have you complete a series of questionnaires. There will be one more opportunity to perform this task on your next visit.

Dribble & Shoot Obstacle Task

That was the end of the DSOT. I need to take a moment to look at the scores. You completed an average of ____ cycles, and took ____ shots in the 4 1/2 min time span. Did you perform as well as you possibly could have? This is a pretty tiring task, especially for someone who is not in really good physical condition. Its time to take a short break, and then complete some questionnaires. Thanks.

APPENDIX W
GENERAL SCRIPT MEETING TWO
(all groups)

Hi. Thanks for coming back. Today, you perform two of the same tasks that were completed on the first meeting. This visit will take approximately 45 min. First, you will complete the SRT or the DSOT, afterwards there will be one questionnaire and then the last drill. Following feedback and a 2 min rest, you will complete a series of questionnaires.

Before we continue, please remember not to discuss anything concerning this research with other participants, it is important that your opinion does not bias theirs. Also, I must remind you that it is very important to take this performance and the questionnaires seriously. Although the tasks are familiar, please try your best and take the necessary time to answer each questionnaire based upon today's performance. Today is the last time for these tasks, afterwards you will have one more visit. The final meeting will be a brief one-on-one competition (game for control groups) against another participant with similar skills and will last approximately 30 min.

Do you have any questions for me? If not, take a few minutes to warm-up, then, we will begin the first task.

Shoot and Rebound Task

To briefly remind you of the tasks. Remember that the SRT is presented to critique your speed and shot precision, by having you stand in front of the cone and shooting the ball for a goal. There are up to three attempts at each position and you must attempt all five positions to complete a trial block. Remember that there is a 2-min break between each trial block. Three trial blocks will conclude this task. During the break, you may continue to work on the task, take a drink, or just rest, and remember that we cannot talk.

Dribble and Shoot Obstacle Task

You probably remember that this is a timed task. The goal is to weave between the cones as fast possible and make as few shot attempts as needed to make a goal during any given trial. Three trial blocks will conclude this secession, and there will be a 2-min rest between each. During the break you may work on the task, have a drink, or rest. Remember, I cannot speak to you during the break.

APPENDIX X
ONE-ON-ONE COMPETITION SCRIPT
(success and failure treatment)

The purpose of this meeting is to compete with another player during a one-on-one basketball game (introduce players). The winner will be determined by the first player to reach 12 points. If the competition lasts for more than 8 min there will be a 2 min rest if needed prior to finishing the game. During the break, please do not leave the gymnasium. You may take a drink, continue to shoot around, or have a seat. After the competition begins, I will not be able to answer any of your questions. Before beginning the game I will have you complete one questionnaire and at the end of the game there will be four more.

To begin the one-on-one competition the two of you will compete for a jump ball that I will toss, from the free throw line. Each time you make a basket, you will maintain possession of the ball for the beginning of the next play. After a goal is made the ball must be taken out of play and checked in before beginning the next point. When you make a basket within the three point area two points will be added to your score, and if a goal is made beyond that area three points are awarded.

In the event of a foul, the fouled person will receive a one point free throw attempt and maintain possession of the ball for the next play. Fouls may be called by players or the experimenter. All balls rebounded by the defensive

player must be taken back to the three point area before play begins, if the ball previously touched the rim. If the offensive player rebounds the ball, play continues from that point. Also, when screening the ball you may block up to the key, afterwards you have to turn and face to goal to complete the play (you are not allowed to block with your body, to the goal). All other rules will be governed under the guidelines of standard basketball play.

Do either of you have any questions? Before we get started, I need you to give me your address so that I can mail you a letter explaining this research project in more detail. I will send the letters after the last subjects complete their third meeting.

You two should take a few minutes to warm-up and then we will begin the competition.

Good Luck!

APPENDIX Y
ONE-ON-ONE GAME SCRIPT
(control groups)

The purpose of this meeting is to have your heart rate monitored while playing basketball with another subject. Both of you will wear monitors during the game. This is not a competition, therefore, scores should not be kept. However, it is important that you are aware of how tired you are feeling while playing. The game will last for approximately 8 min and there will be a 2 min break if needed within that time. After about 4-min, I will have you check your pulse and rank how tired you feel, on a scale from 1 - 10. A response of 1 indicates not tired at all and 10 corresponds to extremely tired. During the breaks, please do not leave the gymnasium. You may take a drink, continue to shoot around, or have a seat. After the first shot attempt, I will not be able to answer any of your questions if they are not related to the task. Before beginning the game I will have you complete one questionnaire and at the end of the game there will be four more.

To begin the game the two of you will try to rebound a jump ball that I will toss, from the free throw line. Each time you make a basket, you will maintain possession of the ball for the beginning of the next play and I will ask for heart rates. After a goal is made the ball must be taken out of bounds and checked in before beginning the next play. You are allowed to shoot baskets from within the three point area and beyond those parameters if desired.

In the event of a foul, the fouled person will receive one free throw attempt and maintain possession of the ball for the next play. Fouls may be called by players or the experimenter. All balls rebounded by the defensive player must be taken back to the three point area before play begins, if the ball previously touched the rim. If the offensive player rebounds the ball, play continues from that point. Also, when screening the ball you may block up to the key, afterwards you have to turn and face to goal to complete the play (you are not allowed to block with your body, to the goal). All other rules will be governed under the guidelines of standard basketball play.

Do either of you have any questions? Before we get started, I need you to give me your address so that I can mail you a letter explaining this research project in more detail. I will send the letters after the last subjects complete their third meeting.

You two should take a few minutes to warm-up. When you are ready and your pulse is checked, we will begin this task.

Good Luck!

APPENDIX Z DEBRIEFING LETTER

Date

Dear Participant,

This letter is to thank you for your participation in my basketball research. I realize that you sacrificed your time over several days to accommodate me. Your dedication was greatly appreciated. You made it possible for me to conduct the necessary research for my dissertation project. As a result of your participation, I am one giant step closer to completing my obligations towards obtaining my Ph.D.

I am also writing this letter to debrief you on the nature of the study. The study was based on motivation in sport. The major objective of the research was to determine whether there are shifts in motivation under various conditions. To answer this question, I randomly placed you into one of six treatment groups, based on your responses to the initial questionnaires. You were either assigned to a group that received all failure feedback, success feedback, or I carried on a general conversation with you following your performance (control).

Those of you who were placed in the success or failure treatment groups were led to believe that you were competing against norms established by coaches within the state of North Carolina. To accomplish the goals of the experiment, I created generic information about norms (**there were no actual norms established**). It was necessary to have you believe that your performance on the tasks were either successful or unsuccessful. I apologize for any discomfort that you may have experienced due to the nature of feedback that you received.

Again, I am truly grateful for your participation. If you would like to receive any additional information relating to any portion of this research project, I will be happy to inform you. You may reach me at Florida gymnasium in room (room number). I may also be reached by telephone, my work number is (phone number) and my home number is (phone number).

Sincere Thanks,

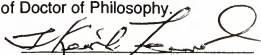
Sarah L. Price
Principal Investigator

Dr. Keith Tennant
Project Supervisor

BIOGRAPHICAL SKETCH

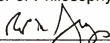
Sarah L. Price was born July 3, 1964, in Bassett, Virginia. When Sarah was age two her family relocated to Martinsville, Virginia, where she spent the remainder of her childhood. She graduated from Martinsville Senior High School at age 17, and then started her college experiences at Johnson C. Smith University (JCSU) where she received a Bachelor of Science degree in physical education and health education in 1986. Also, she obtained a teaching certification in physical education grades K-12, and maintained her interests in academics up to the present. While attending Ohio State University Sarah received a Master of Science degree in adapted physical education. That interest was nurtured through employment in Ashland, Ohio, at a school for developmentally delayed individuals. After a brief period Sarah began working in higher education at JCSU. Following an enlightening and informative experience she began work on a doctorate at the University of Florida in 1992. In the College of Health and Human Performance she studied motor behavior with emphases in sport psychology and motor learning. Sarah completed her dissertation, and received her Doctor of Philosophy in May 1998.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



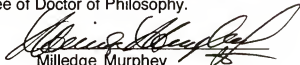
L. Keith Tennant, Chair
Associate Professor of Exercise
and Sport Sciences

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



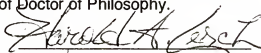
Robert N. Singer
Professor of Exercise
and Sport Sciences

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



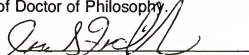
Milledge Murphey
Associate Professor of Exercise
and Sport Sciences

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Harold A. Lerch
Professor Exercise and Sport
Sciences

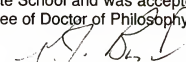
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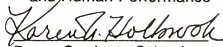
Ira S. Fischler
Professor of Psychology

This dissertation was submitted to the Graduate Faculty of the College of Health and Human Performance and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May, 1998



Dean, College of Health
and Human Performance



Dean, Graduate School